

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	6	("5256784" or "4847385" or "3887379").pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 07:57
L2	368	(cyclopentanone or malononitrile) same (cyanine)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 08:36
L3	462	(cyclopentanone or malononitrile or cycloheptanone or cyclohexanone) same (cyanine)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 08:01
L4	228457	(photocur? or photohard? or photoresist or ((light or photo) adj2 (harden\$4 or curable or curing or polymer\$6 or resist)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 08:35
L5	33	I3 and I4	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 08:01
L6	751	(cyclopentanone or malononitrile or cycloheptanone or cyclohexanone or barbitur\$7) same (cyanine)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 08:48
L7	64	I6 and I4	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 08:01
L8	49	I7 and @ad<"20031007"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 08:36
L9	3018	(photocur? or photohard? or photoresist or ((light or photo) adj2 (harden\$4 or curable or curing or polymer\$6 or resist))) same (Ir or infrared)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 08:47

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L10	3734	(IR or infrared) same (cyanine)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 08:36
L11	156	I9 and I10	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 08:36
L12	120	I11 and @ad<"20031007"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 08:55
L13	58	I12 not printing.ti,ab.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 08:55
L14	830	(photocur? or photohard? or photoresist or ((light or photo) adj2 (harden\$4 or curable or curing or polymer\$6 or resist))) and (Ir or infrared)	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 08:53
L15	830	(photocur? or photohard? or photoresist or ((light or photo) adj2 (harden\$4 or curable or curing or polymer\$6 or resist))) and (Ir or infrared)	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 08:47
L16	18	I14 and (cyanine or polymethine)	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 08:53
L17	9	(cyclopentanone or malononitrile or cycloheptanone or cyclohexanone or barbitur\$7 or cycloketone or ketone) and I14	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 08:54
L18	26	I16 or I17	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 08:49
L19	0	(rhodanine) and I14	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 08:52

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L20	81202	(photocur? or photohard? or photoresist or ((light or photo) adj2 (harden\$4 or curable or curing or polymer\$6 or resist)))	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 08:53
L21	80	I20 and (cyanine or polymethine)	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 08:53
L22	198	(cyclopentanone or malononitrile or cycloheptanone or cyclohexanone or barbitur\$7 or cycloketone or "cyclic ketone" or rhodanine) and I20	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 08:54
L23	277	I21 or I22	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 08:54
L24	211	I23 and @ad<"20031007"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 08:55
L25	194	I24 not "printing plate"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 09:27
L26	2	"two photon" same "printing plate"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 09:34
L27	0	"6267913".pn. and "printing plate"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 09:29
L28	4	jp-04031863-\$.did. or jp-58029803-\$.did.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 09:35
L29	1	jp-07103171-\$.did.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 09:37

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L30	1292461	ep-438123-\$.did. or ep-545380-\$.did. or ep-694586-\$.did. ro ep-938085-\$. did. or ep-1063231-\$.did. or ep-1096315-\$.did. or wo-200107524-\$.did.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 09:38
L31	13	ep-438123-\$.did. or ep-545380-\$.did. or ep-694586-\$.did. or ep-938085-\$. did. or ep-1063231-\$.did. or ep-1096315-\$.did. or wo-200107524-\$.did.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 09:41
L32	2	ep-342810-\$.did.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 09:43
L33	1	1995jp-0103171.ap,prai.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/01 09:44

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SINCE FILE

TOTAL

ENTRY

SESSION

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0.21

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(US2004131969/PN)

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=> tra rn l2
L4 TRANSFER L2 1- RN : 31 TERMS
L5 31 L4

=> tra rn l3
L6 TRANSFER L3 1- RN : 25 TERMS
L7 25 L6

=> file caplus		
COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.44	30.92

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=> s l5 or l6

10194 L5
L9 17488 L5 OR L8

=> s l9 and (photopolymer6 or acrylate or radical?)

6 IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system. For a list of commands available to you in the current file, enter "HELP COMMANDS" at an arrow prompt (=>).

=> s l9 and (photopolymer? or acrylate or radical?)

16305 PHOTOPOLYMER?
21150 PHOTOPOLYMN
316 PHOTOPOLYMNS
21235 PHOTOPOLYMN
(PHOTOPOLYMN OR PHOTOPOLYMNS)
1422 PHOTOPOLYMD
1122 PHOTOPOLYMG
30644 PHOTOPOLYMER?
(PHOTOPOLYMER? OR PHOTOPOLYMN OR PHOTOPOLYMD OR PHOTOPOLYMG)
183857 ACRYLATE
35928 ACRYLATES
193767 ACRYLATE
(ACRYLATE OR ACRYLATES)
381634 RADICAL?

L10 957 L9 AND (PHOTOPOLYMER? OR ACRYLATE OR RADICAL?)

=> s l10 and (cyanine or polymethine)

15330 CYANINE
1359 CYANINES
15728 CYANINE
(CYANINE OR CYANINES)
2795 POLYMETHINE
247 POLYMETHINES
2857 POLYMETHINE
(POLYMETHINE OR POLYMETHINES)

L11 13 L10 AND (CYANINE OR POLYMETHINE)

=> s l9 and (cyanine or polymethine)

15330 CYANINE
1359 CYANINES
15728 CYANINE
(CYANINE OR CYANINES)
2795 POLYMETHINE
247 POLYMETHINES

2857 POLYMETHINE
(POLYMETHINE OR POLYMETHINES)
L12 476 L9 AND (CYANINE OR POLYMETHINE)

=> s l9 and (photopolymer? or acrylate or radical? or photoinitiator or photocurable or photocurin
16305 PHOTOPOLYMER?
21150 PHOTOPOLYMN
316 PHOTOPOLYMNS
21235 PHOTOPOLYMN
(PHOTOPOLYMN OR PHOTOPOLYMNS)
1422 PHOTOPOLYMD
1122 PHOTOPOLYMG
30644 PHOTOPOLYMER?
(PHOTOPOLYMER? OR PHOTOPOLYMN OR PHOTOPOLYMD OR PHOTOPOLYMG)
183857 ACRYLATE
35928 ACRYLATES
193767 ACRYLATE
(ACRYLATE OR ACRYLATES)
381634 RADICAL?
9899 PHOTOINITIATOR
4880 PHOTOINITIATORS
12364 PHOTOINITIATOR
(PHOTOINITIATOR OR PHOTOINITIATORS)
12434 PHOTOCURABLE
3 PHOTOCURABLES
12434 PHOTOCURABLE
(PHOTOCURABLE OR PHOTOCURABLES)
2748 PHOTOCURING
1369 PHOTOHARD?
268319 ACRYLIC
1348 ACRYLICS
268701 ACRYLIC
(ACRYLIC OR ACRYLICS)
213818 METHACRYLATE
11823 METHACRYLATES
216155 METHACRYLATE
(METHACRYLATE OR METHACRYLATES)
23462 ETHYLENIC?
1056450 LIGHT
8449 LIGHTS
1059516 LIGHT
(LIGHT OR LIGHTS)
110994 PHOTO
1386 PHOTOS
112319 PHOTO
(PHOTO OR PHOTOS)
1857065 CUR?
580796 HARD?
1915776 POLYMER?
87234 POLYMD
87234 POLYMD
(POLYMD)
33002 POLYMG
341161 POLYMN
8958 POLYMNS
342335 POLYMN
(POLYMN OR POLYMNS)
1984661 POLYMER?
(POLYMER? OR POLYMD OR POLYMG OR POLYMN)
46417 (LIGHT OR PHOTO) (3A) (CUR? OR HARD? OR POLYMER?)
L13 1369 L9 AND (PHOTOPOLYMER? OR ACRYLATE OR RADICAL? OR PHOTOINITIATOR
OR PHOTOCURABLE OR PHOTOCURING OR PHOTOHARD? OR ACRYLIC OR METHA
CRYLATE OR ETHYLENIC? OR ((LIGHT OR PHOTO) (3A) (CUR? OR HARD? OR
POLYMER?)))

=> s l12 and (photopolymer? or acrylate or radical? or photoinitiator or photocurable or photocuri
16305 PHOTOPOLYMER?
21150 PHOTOPOLYMN
316 PHOTOPOLYMNS
21235 PHOTOPOLYMN
(PHOTOPOLYMN OR PHOTOPOLYMNS)
1422 PHOTOPOLYMD

1122 PHOTOPOLYMG
 30644 PHOTOPOLYMER?
 (PHOTOPOLYMER? OR PHOTOPOLYMN OR PHOTOPOLYMD OR PHOTOPOLYMG)
 183857 ACRYLATE
 35928 ACRYLATES
 193767 ACRYLATE
 (ACRYLATE OR ACRYLATES)
 381634 RADICAL?
 9899 PHOTOINITIATOR
 4880 PHOTOINITIATORS
 12364 PHOTOINITIATOR
 (PHOTOINITIATOR OR PHOTOINITIATORS)
 12434 PHOTOCURABLE
 3 PHOTOCURABLES
 12434 PHOTOCURABLE
 (PHOTOCURABLE OR PHOTOCURABLES)
 2748 PHOTOCURING
 1369 PHOTOHARD?
 268319 ACRYLIC
 1348 ACRYLICS
 268701 ACRYLIC
 (ACRYLIC OR ACRYLICS)
 213818 METHACRYLATE
 11823 METHACRYLATES
 216155 METHACRYLATE
 (METHACRYLATE OR METHACRYLATES)
 23462 ETHYLENIC?
 1056450 LIGHT
 8449 LIGHTS
 1059516 LIGHT
 (LIGHT OR LIGHTS)
 110994 PHOTO
 1386 PHOTOS
 112319 PHOTO
 (PHOTO OR PHOTOS)
 1857065 CUR?
 580796 HARD?
 1915776 POLYMER?
 87234 POLYMD
 87234 POLYMD
 (POLYMD)
 33002 POLYMG
 341161 POLYMN
 8958 POLYMNS
 342335 POLYMN
 (POLYMN OR POLYMNS)
 1984661 POLYMER?
 (POLYMER? OR POLYMD OR POLYMG OR POLYMN)
 46417 (LIGHT OR PHOTO) (3A) (CUR? OR HARD? OR POLYMER?)
 L14 23 L12 AND (PHOTOPOLYMER? OR ACRYLATE OR RADICAL? OR PHOTOINITIATOR
 OR PHOTOCURABLE OR PHOTOCURING OR PHOTOHARD? OR ACRYLIC OR
 METHACRYLATE OR ETHYLENIC? OR ((LIGHT OR PHOTO) (3A) (CUR? OR HARD?
 OR POLYMER?)))

=> d all 1-23

L14 ANSWER 1 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2006:269700 CAPLUS <<LOGINID::20061101>>
 DN 144:321624
 ED Entered STN: 23 Mar 2006
 TI Two-photon-absorbing decolorable materials and polymerizable materials,
 their polymerization, and refractive index modulators and 3D recording
 disks therefrom
 IN Takizawa, Hiroo
 PA Fuji Photo Film Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 105 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 35, 41, 73

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2006078876	A2	20060323	JP 2004-264202	20040910
	US 2006083890	A1	20060420	US 2005-219737	20050907
PRAI	JP 2004-264202	A	20040910		

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	JP 2006078876	IPCI	G02F0001-361 [I,A]; G02F0001-35 [I,C*]; G11B0007-244 [I,A]; G11B0007-24 [I,C*]
		FTerm	2K002/AA05; 2K002/AB29; 2K002/BA01; 2K002/CA06; 2K002/HA22; 5D029/JA04
	US 2006083890	IPCI	B32B0003-02 [I,A]
		NCL	428/064.100

AB The decolorable materials contain (A) two-photon absorption dyes, (B) decolorable dyes showing molar extinction coeff. $\geq 10^4$ at wavelength of the two-photon absorption, and optionally (C) precursors for decoloring agents (***radicals*** , acids, bases, nucleophiles, electrophiles, or singlet O). In the materials, excitation energy of the two-photon absorption cause electron or energy transfer (and generation of decoloring agents from C) and then decoloration of B. The materials may contain electron donors (e.g., phenothiazines), reducing ***radical*** cations of A. Also claimed are refractive index modulators and three-dimensional recording disks (e.g., CD-R, DVD-R) contg. the materials. Polymerizable materials contg. A, B, polymn. initiators, polymerizable compds., and binders are subjected to exciting A and decoloring parts of B using the excitation energy to give latent images of residual B, which are irradiated to be polymd. according to linear absorption of B.

ST two photon absorbing decolorable dye CD DVD; ***photopolymn*** two photon excitation dye decoloration; three dimensional recording disk two photon absorption; refractive index modulator two photon absorption

IT Polysiloxanes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(Me Ph, binders; two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT Fluoropolymers, preparation
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(***acrylic*** ; two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT Polycarbonates, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(binders; two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT Electrophiles
Nucleophiles
(decolorizing agents; two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT Acids, preparation
Bases, preparation
Radicals , preparation
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(decolorizing agents; two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT Sulfonic acids, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(esters, acid generators, decolorizing agents; two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT Onium compounds
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(iodonium, diaryl, ***radical*** /acid generators, decolorizing agents; two-photon-absorbing decolorable materials and polymerizable

materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT Peroxides, uses
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (org., ***radical*** generators, decolorizing agents; two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT Photoimaging materials
 (***photopolymerizable*** ; two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT Polymerization
 (***photopolymn*** .; two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT Ketones, uses
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (***radical*** generators, decolorizing agents; two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT Borates
 Sulfonium compounds
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (***radical*** /acid generators, decolorizing agents; two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT Optical modulators
 (refractive index; two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT Diazonium compounds
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (salts, ***radical*** /acid generators, decolorizing agents; two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT Decolorization
 Decolorizing agents
 Dyes
 Optical disks
 Two-photon absorption
 (two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT Epoxy resins, preparation
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT ***Cyanine*** dyes
 (two-photon-absorbing; two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT Photoexcitation
 (two-photon; two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT 3524-62-7
 RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES (Uses)
 (MBO, polymn. initiator; two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT 9003-20-7, Poly(vinyl acetate) 9003-53-6, Polystyrene 9003-54-7,

Acrylonitrile-styrene copolymer 9004-36-8, Cellulose acetate butyrate 9010-88-2, Ethyl ***acrylate*** -methyl ***methacrylate*** copolymer 9011-14-7, Poly(methyl ***methacrylate***) 9011-53-4, Butyl ***methacrylate*** -isobutyl ***methacrylate*** copolymer

RL: TEM (Technical or engineered material use); USES (Uses)
 (binders; two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT 64381-98-2 159395-90-1 529512-53-6 879906-60-2 879906-63-5
 879906-66-8 879906-69-1 879906-72-6 879906-74-8 879906-78-2
 879906-80-6 879906-83-9 879906-86-2 879906-89-5 879906-92-0
 879906-95-3 879906-98-6 879907-01-4 879907-04-7 879907-07-0
 879907-09-2 879907-14-9 879907-17-2 879907-19-4 879907-22-9
 879907-24-1 879907-26-3 879907-28-5 879907-30-9 879907-32-1
 879907-34-3 879907-36-5 879907-38-7 879907-40-1 879907-42-3
 879907-44-5 879907-46-7 879907-48-9 879907-50-3 879907-52-5
 879907-54-7

RL: TEM (Technical or engineered material use); USES (Uses)
 (decolorable dyes; two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT 347-46-6 1678-43-9, Benzoin tosylate 3584-23-4 27722-45-8,
 N-Tosylphthalimide 58109-40-3, Diphenyliodonium hexafluorophosphate 90311-90-3, Dimethylphenacylsulfonium hexafluorophosphate 114719-51-6,
 2,6-Dinitrobenzyl tosylate 177786-98-0 198641-40-6 202068-80-2
 231955-29-6, Triphenylsulfonium methanesulfonate 365971-70-6
 565469-32-1

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (decoloring agent precursors, acid generators; two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT 133795-09-2

RL: CAT (Catalyst use); MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (decoloring agent precursors, base generators, polymn. catalysts; two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT 14591-65-2 30435-66-6 129918-79-2 133795-11-6 133795-12-7
 168697-84-5 169309-12-0 181885-13-2 188305-03-5 816453-46-0

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (decoloring agent precursors, base generators; two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT 603-34-9, Triphenylamine 1207-72-3, N-Methylphenothiazine 7152-42-3,
 N-Phenylphenothiazine 65181-78-4, TPD

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (electron donors; two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT ***88253-66-1P*** ***88340-89-0P*** ***681836-46-4P***

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
 (in prepn. of two-photon-absorbing dyes; two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT ***115-80-0*** , Triethyl orthopropionate ***120-92-3*** ,
 Cyclopentanone ***769-42-6*** , N,N'-Dimethylbarbituric acid
 927-63-9 ***1120-71-4*** , Propanesultone ***4485-89-6***
 4637-24-5 ***5217-47-0*** , N,N'-Diethylthiobarbituric acid
 5608-83-3 ***29636-96-2*** 61931-68-8 ***66142-15-2***
 165547-54-6 ***398522-14-0***

RL: RCT (Reactant); RACT (Reactant or reagent)
 (in prepn. of two-photon-absorbing dyes; two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT 1707-68-2

RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES (Uses)

(polymn. initiators; two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT 288-32-4D, Imidazole, bis, derivs.
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (***radical*** generators, decolorizing agents; two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT 7782-44-7P, Oxygen, preparation
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (singlet, decolorizing agents; two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT 25101-30-8P, Triethylene glycol diacrylate homopolymer 121225-97-6P 879907-75-2P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT 1680-21-3, Triethylene glycol diacrylate 13048-34-5, 1,10-Decanediol diacrylate 18724-32-8 879907-73-0
 RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
 (two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT ***33628-03-4P*** ***78902-42-8P*** ***681836-47-5P***
 718636-60-3P ***774216-84-1P***
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (two-photon-absorbing dyes; two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

IT 574-93-6D, Phthalocyanine, derivs. 18371-32-9 111545-69-8 217793-15-2 308116-42-9 680232-71-7 680232-73-9 ***718636-63-6*** 809233-25-8 816453-41-5 816453-43-7 816453-44-8 831218-03-2 879906-44-2
 RL: TEM (Technical or engineered material use); USES (Uses)
 (two-photon-absorbing dyes; two-photon-absorbing decolorable materials and polymerizable materials, their polymn., and refractive index modulators and 3D recording disks therefrom)

L14 ANSWER 2 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2005:586773 CAPLUS <<LOGINID::20061101>>
 DN 143:120052
 ED Entered STN: 08 Jul 2005
 TI Hair dye composition containing a fluorindine compound and a coloring composition
 IN Lagrange, Alain
 PA L'oreal, Fr.
 SO Fr. Demande, 48 pp.
 CODEN: FRXXBL
 DT Patent
 LA French
 IC ICM A61K007-13
 CC 62-3 (Essential Oils and Cosmetics)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2864782	A1	20050708	FR 2004-50041	20040107
	EP 1552813	A1	20050713	EP 2005-290033	20050106
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU				
	JP 2005213497	A2	20050811	JP 2005-2556	20050107
	US 2005188475	A1	20050901	US 2005-30170	20050107
PRAI	FR 2004-50041	A	20040107		
	US 2004-549534P	P	20040304		

CLASS	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	FR 2864782	ICM	A61K007-13
		IPCI	A61K0007-13 [ICM,7]
		IPCR	C07D0487-00 [I,C*]; C07D0487-04 [I,A]; A61K0008-00 [I,C*]; A61K0008-00 [I,A]; A61K0008-30 [I,C*]; A61K0008-35 [I,A]; A61K0008-49 [I,A]; A61Q0005-10 [I,C*]; A61Q0005-10 [I,A]; C09B0017-00 [I,C*]; C09B0017-06 [I,A]; D06P0003-04 [I,C*]; D06P0003-08 [I,A]
	EP 1552813	ECLA	A61K008/49F; A61Q005/10
		IPCI	A61K0007-13 [ICM,7]
		IPCR	C07D0487-00 [I,C*]; C07D0487-04 [I,A]; A61K0008-00 [I,C*]; A61K0008-00 [I,A]; A61K0008-30 [I,C*]; A61K0008-35 [I,A]; A61K0008-49 [I,A]; A61Q0005-10 [I,C*]; A61Q0005-10 [I,A]; C09B0017-00 [I,C*]; C09B0017-06 [I,A]; D06P0003-04 [I,C*]; D06P0003-08 [I,A]
	JP 2005213497	ECLA	A61K008/49F; A61Q005/10
		IPCI	C09B0017-06 [ICM,7]; C09B0017-00 [ICM,7,C*]; A61K0007-00 [ICS,7]; A61K0007-13 [ICS,7]; C07D0487-04 [ICS,7]; C07D0487-00 [ICS,7,C*]; D06P0003-08 [ICS,7]; D06P0003-04 [ICS,7,C*]
		IPCR	A61K0008-30 [I,C*]; A61K0008-49 [I,A]; A61Q0005-10 [I,A]; A61Q0005-10 [I,C*]
		FTERM	4C050/AA01; 4C050/AA08; 4C050/BB08; 4C050/CC08; 4C050/EE04; 4C050/FF01; 4C050/GG01; 4C050/HH01; 4C083/AA112; 4C083/AB012; 4C083/AB352; 4C083/AC082; 4C083/AC102; 4C083/AC122; 4C083/AC152; 4C083/AC172; 4C083/AC242; 4C083/AC472; 4C083/AC491; 4C083/AC522; 4C083/AC532; 4C083/AC542; 4C083/AC642; 4C083/AC692; 4C083/AC841; 4C083/AC851; 4C083/AC861; 4C083/AD042; 4C083/AD212; 4C083/AD282; 4C083/BB04; 4C083/BB05; 4C083/BB06; 4C083/BB07; 4C083/BB32; 4C083/BB33; 4C083/BB34; 4C083/BB35; 4C083/EE26; 4H057/AA02; 4H057/BA01; 4H057/BA09; 4H057/CA07; 4H057/CB45; 4H057/CB46; 4H057/DA01; 4H057/DA21
	US 2005188475	IPCI	A61K0007-13 [ICM,7]
		IPCR	A61K0008-30 [I,C*]; A61K0008-49 [I,A]; A61Q0005-10 [I,A]; A61Q0005-10 [I,C*]
		NCL	008/405.000
		ECLA	A61K008/49F; A61Q005/10
OS	MARPAT 143:120052		
GI			

/ Structure 1 in file .gra /

AB A hair dye compn. contains a direct dye I in which :R1, R2, R3, are identical or different and represent a linear or branched C1-2 ***radical*** or a arylalkyl or aryl ***radical*** ; R4, R5, are identical or different and represent a hydrogen atom, a halogen, an alkyl, and an alkoxy; n, m = 0-4. A hair dye prepd. contained 7,14-bis-(2-hydroxy-ethyl)-5-methyl-7,14-dihydro-quinoxalino[2,3-b]phenazine-5-ium chloride (10-3 mol) benzyl alc. 4.0, polyethylene glycol (60 EO) 6.0, hydroxyethyl cellulose 0.7, 60% alkylpolyglucoside 4.5, phosphate buffer q.s. pH = 7, and water q.s. 100 g. The compn. gives a blue tone to the hair.

ST hair dye fluorindine compd coloring

IT Surfactants
(amphoteric; hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Surfactants
(anionic; hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Azines
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(bis-; hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Surfactants
(cationic; hair dye compn. contg. fluorindine compd. and coloring compn.)

compn.)

IT Unsaturated compounds
 , RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
 (' ***cyanines*** ; hair dye compn. contg. fluorindine compd. and
 coloring compn.)

IT Flavones
 Hydrazones
 Lactones
 Polyenes
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
 (derivs.; hair dye compn. contg. fluorindine compd. and coloring
 compn.)

IT Dyes
 (direct; hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Hair preparations
 (dyes; hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Azo dyes
 Oxidizing agents
 (hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Nitro compounds
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Azines
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
 (hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Bromates
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
 (hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Carotenes, biological studies
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
 (hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Enzymes, biological studies
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
 (hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Peroxysulfates
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
 (hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Porphyrins
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
 (hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Ketones, biological studies
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
 (hydroxy; hair dye compn. contg. fluorindine compd. and coloring
 compn.)

IT Surfactants
 (ionic; hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Functional groups
 (methylidyne group; hair dye compn. contg. fluorindine compd. and
 coloring compn.)

IT Surfactants
 (nonionic; hair dye compn. contg. fluorindine compd. and coloring
 compn.)

IT Salts, biological studies
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
 (of peroxyacids; hair dye compn. contg. fluorindine compd. and coloring
 compn.)

IT Dyes
 (oxazines; hair dye compn. contg. fluorindine compd. and coloring
 compn.)

IT Group IIIA element compounds
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
 (perborates; hair dye compn. contg. fluorindine compd. and coloring
 compn.)

IT Dyes
 (thiazines; hair dye compn. contg. fluorindine compd. and coloring
 compn.)

IT 11084-05-2D, Oxazine, derivs.
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
 (di-; hair dye compn. contg. fluorindine compd. and coloring compn.)

IT 51-17-2D, Benzimidazole, derivs. 62-53-3D, Aniline, carboxanilide
 derivs. 74-82-8D, Methane, triaryl derivs. 81-77-6D, Indanthrone,

derivs. 81-83-4D, Naphthalimide, derivs. 82-05-3D, Benzanthrone,
 derivs. 83-08-9D, Quinophthalone, derivs. 84-65-1D, Anthraquinone,
 derivs. 90-44-8D, Anthrone, ptrimido-fused derivs. 91-22-5D, Quinoline
 , derivs. 91-64-5D, Coumarin, derivs. 92-32-0D, Pyronine, derivs.
 92-82-0D, Phenazine, derivs. 92-83-1D, Xanthene, derivs. 92-84-2D,
 Phenothiazine, derivs. 95-16-9D, Benzothiazole, derivs. 95-70-5
 101-81-5D, Diphenylmethane, derivs. 106-50-3, 1,4-Diaminobenzene,
 biological studies 106-51-4D, 2,5-Cyclohexadiene-1,4-dione, derivs.
 109-97-7D, Pyrrole, diketo pyrrolo derivs. 122-39-4D, Diphenylamine,
 derivs. 123-30-8, p-Aminophenol 128-64-3D, Isoviolanthrone, derivs.
 128-70-1D, Pyranthrone, derivs. 129-56-6D, Pyrazolanthrone, derivs.
 130-00-7D, Naphtholactam, derivs. 130-15-4D, 1,4-Naphthalenedione,
 derivs. 198-55-0D, Perylene, derivs. 254-04-6D, Benzopyran, derivs.
 260-94-6D, Acridine, derivs. ***273-53-0D*** , Benzoxazole, derivs.
 289-95-2D, Pyrimidine, anthra derivs. 475-71-8D, Flavanthrone, derivs.
 480-91-1D, Isoindolinone, derivs. 482-89-3D, Indigo, derivs.
 496-12-8D, Isoindoline, bis derivs. 496-12-8D, Isoindoline, derivs.
 500-85-6D, Indophenol, derivs. 504-65-4D, Formazan, derivs. 514-73-8D,
 Dithiazine, derivs. 522-75-8D, Thioindigo, derivs. 537-65-5D,
 Indamine, derivs. 574-93-6D, Phthalocyanine, derivs. 578-95-0D,
 Acridone, derivs. 588-59-0D, Stilbene, derivs. 1047-16-1D,
 Quinacridone, derivs. 2053-29-4D, Azomethine, derivs. 2412-14-8D,
 Thiopyronine, derivs. 2835-95-2, 5-Amino-2-methylphenol 6245-87-0D,
 Indoaniline, derivs. 7722-84-1, Hydrogen peroxide, biological studies
 11120-54-0D, Oxadiazole, derivs. 13408-62-3D, Ferricyanide, alkali metal
 salts 27988-97-2D, Tetrazole, quaternized derivs. 39455-90-8D,
 Pyrazolone, derivs. 43135-91-7D, Benzimidazolone, derivs. 55302-96-0,
 5-N-(.beta.-Hydroxyethyl)amino-2-methylphenol 78675-98-6D, Squaraine,
 derivs. 97705-96-9D, Naphthanilide, derivs. 111076-33-6D, Fluorindine,
 derivs. 112772-03-9D, Benzindole, derivs. 226225-88-3 857470-17-8
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
 (hair dye compn. contg. fluorindine compd. and coloring compn.)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

- RE
- (1) Henkel Kga; WO 9920233 A 1999 CAPLUS
 - (2) Srinivasa, R; US 6193912 B1 2001 CAPLUS
 - (3) Straley, J; US 3390948 A 1968 CAPLUS

L14 ANSWER 3 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:408296 CAPLUS <<LOGINID::20061101>>

DN 142:448376

ED Entered STN: 13 May 2005

TI Black inks with good storage stability, light and moisture resistance, and durability and method for ink-jet printing using them

IN Oi, Ryu; Sugimoto, Kenichi; Suzuki, Rihoko; Fujii, Kenichi

PA Mitsui Chemicals Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 41 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C09D011-00

ICS B41J002-01; B41M005-00; C09B047-22; C09B067-20

CC 42-12 (Coatings, Inks, and Related Products)

Section cross-reference(s): 74

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2005120267	A2	20050512	JP 2003-357802	20031017
PRAI JP 2003-357802		20031017		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2005120267	ICM	C09D011-00
	ICS	B41J002-01; B41M005-00; C09B047-22; C09B067-20
	IPCI	C09D0011-00 [ICM,7]; B41J0002-01 [ICS,7]; B41M0005-00 [ICS,7]; C09B0047-22 [ICS,7]; C09B0047-04 [ICS,7,C*]; C09B0067-20 [ICS,7]; C09B0067-00 [ICS,7,C*]
	IPCR	B41J0002-01 [I,A]; B41J0002-01 [I,C*]; B41M0005-00 [I,A]; B41M0005-00 [I,C*]; C09B0047-04 [I,C*]; C09B0047-22 [I,A]; C09B0067-00 [I,C*]; C09B0067-20 [I,A]; C09D0011-00 [I,A]; C09D0011-00 [I,C*]
	FTERM	2C056/EA05; 2C056/EA13; 2C056/FC01; 2H086/BA55;

2H086/BA62; 4J039/BA04; 4J039/BC60; 4J039/EA10;
4J039/EA19; 4J039/EA35; 4J039/EA38; 4J039/EA41;
4J039/EA44; 4J039/EA46; 4J039/GA24

OS MARPAT 142:448376
GI

/ Structure 2 in file .gra /

AB The black inks contain carbon black and phthalocyanine dyes with the max. absorption wavelength (.lambda.max) .gtoreq.600 nm such as I (A1-A16 = H, halo, substituent via C, O, N, or S; .gtoreq.1 of A1-A16 = substituent via N or S; M = divalent metal atom, 3- or 4-valent substituted metal atom, oxymetal). High-quality images are formed by ink-jet printing using the black inks (as gray or photo black color). Thus, a black ink contg. carbon black (MA 100), a phthalocyanine dye (.lambda.max 915 nm; prepd. by reaction of C.I. Pigment Green 7, 2-aminothiophenol, 2-ethylhexanoyl chloride, and fuming sulfuric acid), and styrene- ***acrylic*** acid copolymer was printed on paper to give an image, showing good moisture resistance and light resistance.

ST black ink phthalocyanine dye carbon black; jet printing black dye max absorption wavelength; light moisture resistance storage stability black ink

IT Carbon black, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(MA 100, MCF 88, pigments; black inks with good storage stability, light and moisture resistance, and durability for jet printing)

IT Ink-jet printing
(black inks with good storage stability, light and moisture resistance, and durability for jet printing)

IT Polyesters, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(dye-contg. particles; black inks with good storage stability, light and moisture resistance, and durability for jet printing)

IT Inks
(jet-printing, black, storage-stable, moisture- and light-resistant; black inks with good storage stability, light and moisture resistance, and durability for jet printing)

IT ***Cyanine*** dyes
(phthalocyanine; black inks with good storage stability, light and moisture resistance, and durability for jet printing)

IT 25085-34-1, ***Acrylic*** acid-styrene copolymer
RL: TEM (Technical or engineered material use); USES (Uses)
(binders; black inks with good storage stability, light and moisture resistance, and durability for jet printing)

IT 147-14-8DP, Copper phthalocyanine, derivs.
RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(black inks with good storage stability, light and moisture resistance, and durability for jet printing)

IT 79-11-8, Chloroacetic acid, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(black inks with good storage stability, light and moisture resistance, and durability for jet printing)

IT 332171-76-3P, Acrylamide-butyl ***acrylate*** -ethylene glycol dimethacrylate-glycidyl ***methacrylate*** -methacrylic acid-styrene copolymer ammonium salt
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(core-shell, dye-contg. particles; black inks with good storage stability, light and moisture resistance, and durability for jet printing)

IT 81977-96-0P 213381-36-3P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(dye-contg. particles; black inks with good storage stability, light and moisture resistance, and durability for jet printing)

IT 52-90-4, L-Cysteine, reactions 60-23-1, 2-Aminoethanethiol 95-55-6, 2-Aminophenol 137-07-5, 2-Aminothiophenol 760-67-8, 2-Ethylhexanoyl chloride ***1120-71-4***, 1,3-Propanesultone 1328-53-6, C.I. Pigment Green 7 14794-31-1, Ethylsuccinyl chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(in prepn. of dyes; black inks with good storage stability, light and moisture resistance, and durability for jet printing)

L14 ANSWER 4 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:408295 CAPLUS <<LOGINID::20061101>>
DN 142:448375
ED Entered STN: 13 May 2005
TI Black inks with good storage stability, light and moisture resistance, and durability and method for ink-jet printing using them
IN Oi, Ryu; Sugimoto, Kenichi; Suzuki, Rihoko; Fujii, Kenichi
PA Mitsui Chemicals Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 47 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C09D011-00
ICS B41J002-01; B41M005-00; C09B005-14; C09B047-22
CC 42-12 (Coatings, Inks, and Related Products)
Section cross-reference(s): 74

FAN.CNT 1
PATENT NO. KIND DATE APPLICATION NO. DATE

PI JP 2005120266 A2 20050512 JP 2003-357801 20031017
PRAI JP 2003-357801 20031017

CLASS
PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

JP 2005120266 ICM C09D011-00
ICS B41J002-01; B41M005-00; C09B005-14; C09B047-22
IPCI C09D0011-00 [ICM,7]; B41J0002-01 [ICS,7]; B41M0005-00 [ICS,7]; C09B0005-14 [ICS,7]; C09B0005-00 [ICS,7,C*]; C09B0047-22 [ICS,7]; C09B0047-04 [ICS,7,C*]
IPCR B41J0002-01 [I,A]; B41J0002-01 [I,C*]; B41M0005-00 [I,A]; B41M0005-00 [I,C*]; C09B0005-00 [N,C*]; C09B0005-14 [N,A]; C09B0047-04 [N,C*]; C09B0047-22 [N,A]; C09D0011-00 [I,A]; C09D0011-00 [I,C*]
FTERM 2C056/EA13; 2C056/FC01; 2H086/BA55; 2H086/BA60; 2H086/BA62; 4J039/BC50; 4J039/BC52; 4J039/BC60; 4J039/BC69; 4J039/BC74; 4J039/BC75; 4J039/BC79; 4J039/BE12; 4J039/BE15; 4J039/CA03; 4J039/CA06; 4J039/EA19; 4J039/GA24

OS MARPAT 142:448375
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The black inks contain (A) phthalocyanine dyes with the max. absorption wavelength (λ_{max}) ≥ 600 nm, such as I (A1-A16 = H, halo, substituent via C, O, N, or S; ≥ 1 of A1-A16 = substituent via N or S; M = divalent metal atom, 3- or 4-valent substituted metal atom, oxymetal), and (B) other dyes with λ_{max} 450-600 nm, such as anthrapyridone dyes II [B1-B12 = H, substituent via C, O, or N, carboxylic acid (salt), sulfonic acid (salt)]. High-quality images are formed by ink-jet printing using the black inks (as gray or photo black color). Thus, a black ink contg. a phthalocyanine dye (λ_{max} 915 nm; prepd. by reaction of C.I. Pigment Green 7, 2-aminothiophenol, 2-ethylhexanoyl chloride, and fuming sulfuric acid) and an anthrapyridone dye (λ_{max} 525 nm) was printed on paper to give an image, showing good moisture resistance and light resistance.
ST black ink phthalocyanine anthrapyridone dye; jet printing black dye max absorption wavelength; light moisture resistance storage stability black ink
IT Dyes
(anthrapyridone; black inks with good storage stability, light and

moisture resistance, and durability for jet printing)

IT Ink-jet printing
(black inks with good storage stability, light and moisture resistance, and durability for jet printing)

IT Polyesters, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(dye-contg. particles; black inks with good storage stability, light and moisture resistance, and durability for jet printing)

IT Inks
(jet-printing, black, storage-stable, moisture- and light-resistant; black inks with good storage stability, light and moisture resistance, and durability for jet printing)

IT ***Cyanine*** dyes
(phthalocyanine; black inks with good storage stability, light and moisture resistance, and durability for jet printing)

IT 147-14-8DP, Copper phthalocyanine, derivs.
RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(black inks with good storage stability, light and moisture resistance, and durability for jet printing)

IT 79-11-8, Chloroacetic acid, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(black inks with good storage stability, light and moisture resistance, and durability for jet printing)

IT 332171-76-3P, Acrylamide-butyl ***acrylate*** -ethylene glycol dimethacrylate-glycidyl ***methacrylate*** -methacrylic acid-styrene copolymer ammonium salt
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(core-shell, dye-contg. particles; black inks with good storage stability, light and moisture resistance, and durability for jet printing)

IT 81977-96-0P 213381-36-3P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(dye-contg. particles; black inks with good storage stability, light and moisture resistance, and durability for jet printing)

IT 301539-31-1 851038-96-5 851038-97-6 851038-98-7
RL: TEM (Technical or engineered material use); USES (Uses)
(dyes; black inks with good storage stability, light and moisture resistance, and durability for jet printing)

IT 52-90-4, L-Cysteine, reactions 60-23-1, 2-Aminoethanethiol 95-55-6, 2-Aminophenol 137-07-5, 2-Aminothiophenol 760-67-8, 2-Ethylhexanoyl chloride ***1120-71-4***, 1,3-Propanesultone 1328-53-6, C.I. Pigment Green 7 14794-31-1, Ethylsuccinyl chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(in prepn. of dyes; black inks with good storage stability, light and moisture resistance, and durability for jet printing)

L14 ANSWER 5 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:118427 CAPLUS <<LOGINID::20061101>>

DN 142:207706

ED Entered STN: 10 Feb 2005

TI Two-photon-absorption foaming materials and three-dimensional photorefractive or optical recording media therewith

IN Takizawa, Hiroo

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 56 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03C001-54

ICS G11B007-24

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 41

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005037658	A2	20050210	JP 2003-274096	20030714

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2005037658	ICM	G03C001-54
	ICS	G11B007-24
	IPCI	G03C0001-54 [ICM,7]; G03C0001-52 [ICM,7,C*]; G11B0007-24 [ICS,7]
	IPCR	G03C0001-52 [I,C*]; G03C0001-54 [I,A]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]
	FTERM	2H123/AD24; 2H123/AD30; 2H123/FA00; 2H123/FA18; 5D029/JA04; 5D029/JB11
AB	Materials including two-photon-absorbing compds. (e.g., methine dyes, phthalocyanine dyes) and thereby leading gas-bubble formation are claimed. The gas bubbles may be of 50 nm-5 .mu.m dimension. The materials may further contain blowing agents. Photorefractive recording materials contg. the above, exhibiting extremely high spatial resoln., are also claimed.	
ST	foaming material two photon absorption photorefractive recording; spatial resoln two photon absorption dye recording; methine phthalocyanine two photon absorbing dye optical recording	
IT	Two-photon absorption (nonresonant; two-photon-absorption foaming materials for 3D photorefractive recording media with high spatial resoln.)	
IT	Optical recording materials (photorefractive; two-photon-absorption foaming materials for 3D photorefractive recording media with high spatial resoln.)	
IT	***Cyanine*** dyes (two-photon-absorbing; two-photon-absorption foaming materials for 3D photorefractive recording media with high spatial resoln.)	
IT	Blowing agents Photorefractive materials (two-photon-absorption foaming materials for 3D photorefractive recording media with high spatial resoln.)	
IT	779-19-1 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses) (blowing agents; two-photon-absorption foaming materials for 3D photorefractive recording media with high spatial resoln.)	
IT	9011-53-4P, Butyl ***methacrylate*** -isobutyl ***methacrylate*** copolymer RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (cellular; two-photon-absorption foaming materials for 3D photorefractive recording media with high spatial resoln.)	
IT	574-93-6D, Phthalocyanine, derivs. RL: TEM (Technical or engineered material use); USES (Uses) (dyes, two-photon-absorbing; two-photon-absorption foaming materials for 3D photorefractive recording media with high spatial resoln.)	
IT	75-28-5, Isobutane 124-38-9, Carbon dioxide, formation (nonpreparative) 7446-09-5, Sulfur dioxide, formation (nonpreparative) 7446-11-9, Sulfur trioxide, formation (nonpreparative) 7727-37-9, Nitrogen, formation (nonpreparative) 7782-44-7, Oxygen, formation (nonpreparative) 10102-44-0, Nitrogen dioxide, formation (nonpreparative) RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative) (emission gases; two-photon-absorption foaming materials for 3D photorefractive recording media with high spatial resoln.)	
IT	***54443-93-5P*** ***66142-15-2P*** ***88253-66-1P*** ***88340-89-0P*** ***681836-46-4P*** RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent) (intermediates; two-photon-absorption foaming materials for 3D photorefractive recording media with high spatial resoln.)	
IT	***33628-03-4*** ***78902-42-8*** ***681836-47-5*** ***718636-60-3*** ***774216-84-1*** RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses) (two-photon-absorbing dyes; two-photon-absorption foaming materials for 3D photorefractive recording media with high spatial resoln.)	
IT	77-32-7 ***115-80-0***, Triethyl orthopropionate ***120-92-3***, Cyclopentanone ***769-42-6***, N,N-Dimethylbarbituric acid ***927-63-9*** ***1120-71-4***, Propane sultone ***4485-89-6***	

4637-24-5 5608-83-3 61931-68-8 ***165547-54-6***

398522-14-0 839708-66-6

RL: RCT (Reactant); RACT (Reactant or reagent)
(two-photon-absorption foaming materials for 3D photorefractive
recording media with high spatial resolu.)

IT 767248-59-9

RL: TEM (Technical or engineered material use); USES (Uses)
(two-photon-absorption foaming materials for 3D photorefractive
recording media with high spatial resolu.)

L14 ANSWER 6 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:1058477 CAPLUS <<LOGINID::20061101>>

DN 142:45976

ED Entered STN: 10 Dec 2004

TI Polymerizable compositions showing nonresonant two-photon absorption and
method for three-dimensional refractive index modulation of them and
optical recording therewith

IN Takizawa, Hiroo

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 63 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08F002-44

ICS C08F291-00; C08K005-00; C08L101-00; G02F001-361; G03F007-004;
G11B007-24; C09B023-00

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

Section cross-reference(s): 38, 41, 73

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004346238	A2	20041209	JP 2003-146527	20030523
	US 2004245432	A1	20041209	US 2004-849519	20040520
PRAI	JP 2003-146527	A	20030523		
	JP 2003-312744	A	20030904		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2004346238	ICM	C08F002-44
	ICS	C08F291-00; C08K005-00; C08L101-00; G02F001-361; G03F007-004; G11B007-24; C09B023-00
	IPCI	C08F0002-44 [ICM,7]; C08F0291-00 [ICS,7]; C08K0005-00 [ICS,7]; C08L0101-00 [ICS,7]; G02F0001-361 [ICS,7]; G02F0001-35 [ICS,7,C*]; G03F0007-004 [ICS,7]; G11B0007-24 [ICS,7]; C09B0023-00 [ICS,7]
	IPCR	C08F0002-44 [I,A]; C08F0002-44 [I,C*]; C08F0291-00 [I,A]; C08F0291-00 [I,C*]; C08K0005-00 [I,A]; C08K0005-00 [I,C*]; C08L0101-00 [I,A]; C08L0101-00 [I,C*]; C09B0023-00 [N,A]; C09B0023-00 [N,C*]; G02F0001-35 [I,C*]; G02F0001-361 [I,A]; G03F0007-004 [I,A]; G03F0007-004 [I,C*]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]
	FTERM	2H025/AA01; 2H025/AB14; 2H025/AC08; 2H025/AD01; 2H025/BC13; 2H025/BC51; 2H025/BD03; 2H025/BH05; 2H025/CA00; 2H025/CA41; 2H025/CA48; 2H025/CB04; 2H025/CB07; 2H025/CB41; 2K002/AA01; 2K002/AB40; 2K002/BA01; 2K002/CA06; 2K002/HA16; 4H056/CA01; 4H056/CA02; 4H056/CA05; 4H056/CB01; 4H056/CC02; 4H056/CC04; 4H056/CC08; 4H056/CD05; 4H056/CE02; 4H056/CE03; 4H056/CE06; 4H056/DD03; 4H056/DD06; 4H056/DD16; 4H056/DD19; 4H056/DD23; 4H056/DD29; 4J002/AB021; 4J002/BC021; 4J002/BC111; 4J002/BC121; 4J002/BD121; 4J002/BE021; 4J002/BE061; 4J002/BF021; 4J002/BG021; 4J002/EL126; 4J002/ET006; 4J002/EU026; 4J002/EU116; 4J002/EU126; 4J002/EU136; 4J002/EU226; 4J002/EV306; 4J002/EV326; 4J002/FD096; 4J002/GS02; 4J011/AC04; 4J011/PA53; 4J011/PA66; 4J011/PA67; 4J011/PA68; 4J011/PB40; 4J011/PC02; 4J011/PC08; 4J026/AA02; 4J026/AA26; 4J026/AA30; 4J026/AA34; 4J026/AA38; 4J026/AC36; 4J026/BA05; 4J026/BA08; 4J026/BA27; 4J026/BA28; 4J026/BA29; 4J026/BA30;

4J026/BA40; 4J026/DB06; 4J026/DB15; 4J026/DB36;
4J026/FA05; 4J026/GA09; 5D029/JA04; 5D029/JB11;
5D029/JC17

US 2004245432 IPCI H01L0027-00 [ICM,7]
IPCR H01L0027-00 [I,A]; H01L0027-00 [I,C*]
NCL 250/208.100; 257/E27.133; 430/336.000
ECLA H01L027/146F

OS MARPAT 142:45976

AB The compns. comprise (A) two-photon-absorbing compds. (e.g., methine dyes, phthalocyanine dyes, merocyanine dyes, oxonol dyes), (B) (***radical*** - or acid-generating) polymn. initiators, (C) (***radically*** or cationically polymerizable) monomers, and (D) binders. For modulation of refractive index, the compns. are ***photopolymd*** . by two-photon absorption induced by laser irradiation. at linear absorption-free wavelength which is longer than linear absorption bands of A. After the irradiation, compn. ratio of C and C polymers to D in the compns. is unequalized between at focal regions and at the other regions, allowing the refractive index modulation and three-dimensional optical recording.

ST nonresonant two photon absorption three dimensional ***photopolymn*** ; ***cyanine*** merocyanine oxonol dye two photon absorption; laser irradiation nonlinear refractive index modulation; optical recording refractive index laser ***photopolymn*** disproportionation; two photon absorption three dimensional optical recording

IT Polysiloxanes, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(Me Ph, binders; polymerizable compns. showing nonresonant two-photon absorption for three-dimensional refractive index modulation and optical recording)

IT Polymerization catalysts

(acid-generating; polymerizable compns. showing nonresonant two-photon absorption for three-dimensional refractive index modulation and optical recording)

IT Fluoropolymers, uses

Polyvinyl butyrals

RL: TEM (Technical or engineered material use); USES (Uses)
(binders; polymerizable compns. showing nonresonant two-photon absorption for three-dimensional refractive index modulation and optical recording)

IT Polyvinyl acetals

RL: TEM (Technical or engineered material use); USES (Uses)
(formals, binders; polymerizable compns. showing nonresonant two-photon absorption for three-dimensional refractive index modulation and optical recording)

IT Optical recording

(laser, three-dimensional; polymerizable compns. showing nonresonant two-photon absorption for three-dimensional refractive index modulation and optical recording)

IT Two-photon absorption

(nonlinear, nonresonant; polymerizable compns. showing nonresonant two-photon absorption for three-dimensional refractive index modulation and optical recording)

IT Dyes

(org.; polymerizable compns. showing nonresonant two-photon absorption for three-dimensional refractive index modulation and optical recording)

IT Polymerization

(***photopolymn*** .; polymerizable compns. showing nonresonant two-photon absorption for three-dimensional refractive index modulation and optical recording)

IT ***Cyanine*** dyes

(polymerizable compns. showing nonresonant two-photon absorption for three-dimensional refractive index modulation and optical recording)

IT Polymerization catalysts

(***radical*** ; polymerizable compns. showing nonresonant two-photon absorption for three-dimensional refractive index modulation and optical recording)

IT Optical modulation

(refractive index; polymerizable compns. showing nonresonant two-photon absorption for three-dimensional refractive index modulation and optical recording)

IT Nonlinear optical absorption

(two-photon, nonresonant; polymerizable compns. showing nonresonant

two-photon absorption for three-dimensional refractive index modulation and optical recording)

IT, 9002-89-5, Poly(vinyl alcohol) 9003-20-7, Poly(vinyl acetate)
 9003-53-6, Polystyrene 9004-36-8, CAB
 RL: TEM (Technical or engineered material use); USES (Uses)
 (binders; polymerizable compns. showing nonresonant two-photon absorption for three-dimensional refractive index modulation and optical recording)

IT 574-93-6, Phthalocyanine
 RL: TEM (Technical or engineered material use); USES (Uses)
 (dyes; polymerizable compns. showing nonresonant two-photon absorption for three-dimensional refractive index modulation and optical recording)

IT ***54443-93-5P*** ***66142-15-2P*** ***88253-66-1P***
 88340-89-0P ***681836-46-4P***
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
 (in prepn. of two-photon-absorbing dyes; polymerizable compns. showing nonresonant two-photon absorption for three-dimensional refractive index modulation and optical recording)

IT 67-52-7, Barbituric acid ***115-80-0***, Triethyl orthopropionate
 120-92-3, Cyclopentanone 504-17-6, Thiobarbituric acid
 927-63-9 ***1120-71-4***, Propanesultone ***1497-49-0***
 4485-89-6 ***4637-24-5*** ***29636-96-2*** 61931-68-8
 165547-54-6 ***398522-14-0***
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (in prepn. of two-photon-absorbing dyes; polymerizable compns. showing nonresonant two-photon absorption for three-dimensional refractive index modulation and optical recording)

IT 307-98-2 1484-13-5 1675-54-3, Bisphenol a diglycidyl ether 2386-87-0
 3530-36-7 3741-77-3 18724-32-8 52684-34-1
 RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
 (monomers; polymerizable compns. showing nonresonant two-photon absorption for three-dimensional refractive index modulation and optical recording)

IT 25085-98-7P 25085-99-8P, Bisphenol a diglycidyl ether homopolymer
 26337-50-8P 34558-43-5P 121225-97-6P 805231-70-3P 805231-71-4P
 805231-72-5P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polymers; polymerizable compns. showing nonresonant two-photon absorption for three-dimensional refractive index modulation and optical recording)

IT 20444-09-1 57840-38-7, Triphenylsulfonium hexafluoroantimonate
 58109-40-3, Diphenyliodonium hexafluorophosphate 120307-06-4
 125407-19-4 132838-87-0 153148-27-7 442199-78-2
 RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES (Uses)
 (polymn. initiators; polymerizable compns. showing nonresonant two-photon absorption for three-dimensional refractive index modulation and optical recording)

IT 805231-69-0 805244-72-8
 RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES (Uses)
 (two-photon-absorbing dyes, polymn. initiators; polymerizable compns. showing nonresonant two-photon absorption for three-dimensional refractive index modulation and optical recording)

IT ***33628-03-4P*** ***78902-42-8P*** ***681836-47-5P***
 718636-60-3P ***774216-84-1P***
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (two-photon-absorbing dyes; polymerizable compns. showing nonresonant two-photon absorption for three-dimensional refractive index modulation and optical recording)

IT 52560-25-5 680232-65-9 ***718636-62-5*** ***718636-63-6***
 RL: TEM (Technical or engineered material use); USES (Uses)
 (two-photon-absorbing dyes; polymerizable compns. showing nonresonant two-photon absorption for three-dimensional refractive index modulation and optical recording)

AN 2004:857205 CAPLUS <<LOGINID::20061101>>
 DN 141:350541
 ED Entered STN: 18 Oct 2004
 TI Two-photon absorbing polymerizable composition and polymerization process thereof
 IN Takizawa, Hiroo; Akiba, Masaharu; Tani, Takeharu
 PA Fuji Photo Film Co., Ltd., Japan
 SO U.S. Pat. Appl. Publ., 44 pp.
 CODEN: USXXCO
 DT Patent
 LA English
 IC ICM C08F002-46
 INCL 522002000; 522006000
 CC 35-3 (Chemistry of Synthetic High Polymers)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004204513	A1	20041014	US 2004-804144	20040319
	US 7112616	B2	20060926		
	JP 2004292475	A2	20041021	JP 2003-82730	20030325
	JP 2004292476	A2	20041021	JP 2003-82732	20030325
PRAI	JP 2003-82730	A	20030325		
	JP 2003-82732	A	20030325		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004204513	ICM	C08F002-46
	INCL	522002000; 522006000
	IPCI	C08F0002-46 [I,A]; G03C0001-73 [I,A]
	IPCR	C08F0002-46 [I,C*]; C08F0002-46 [I,A]; C08F0002-50 [I,A]; G03F0007-00 [I,C*]; G03F0007-00 [I,A]; G03F0007-031 [I,C*]; G03F0007-031 [I,A]; G03F0007-20 [I,C*]; G03F0007-20 [I,A]
	NCL	522/002.000; 522/006.000
	ECLA	C08F002/50; G03F007/00S; G03F007/031; G03F007/20S2
JP 2004292475	IPCI	C08F0002-46 [ICM,7]
	IPCR	C08F0002-46 [I,A]; C08F0002-46 [I,C*]
	FTERM	4J011/QA04; 4J011/SA62; 4J011/SA78; 4J011/SA82; 4J011/SA83; 4J011/SA87; 4J011/UA02; 4J011/WA10
JP 2004292476	IPCI	C08F0002-46 [ICM,7]; C08G0065-04 [ICS,7]; C08G0065-00 [ICS,7,C*]
	IPCR	C08F0002-46 [I,A]; C08F0002-46 [I,C*]; C08G0065-00 [I,C*]; C08G0065-04 [I,A]
	FTERM	4J005/AA02; 4J005/BB02; 4J011/QA04; 4J011/SA62; 4J011/SA78; 4J011/SA82; 4J011/SA83; 4J011/SA87; 4J011/SA88; 4J011/UA02; 4J011/WA10

OS MARPAT 141:350541
 AB A two-photon absorbing polymerizable compn. contains at least a two-photon absorbing compd., a polymn. initiator and a polymerizable compd. (e.g., an epoxy compd. or an ***acrylate*** compd.), the compn. being ***photopolymerizable*** upon non-resonant two-photon absorption, wherein the two-photon absorbing compd. is a methine dye.
 ST two photon absorbing polymerizable compn; three dimensional optical recording material
 IT Stereolithography
 (compn.; two-photon absorbing polymerizable compn. and polymn. process thereof)
 IT Optical recording materials
 (three-dimensional; two-photon absorbing polymerizable compn. and polymn. process thereof)
 IT Polymerization
 (two-photon absorbing polymerizable compn. and polymn. process thereof)
 IT ***Cyanine*** dyes
 Polymerization catalysts
 (two-photon absorbing; two-photon absorbing polymerizable compn. and polymn. process thereof)
 IT ***681836-47-5P***
 RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation);
 USES (Uses)
 (dark green; two-photon absorbing polymerizable compn. and polymn. process thereof)
 IT ***33628-03-4P*** ***78902-42-8P*** ***718636-60-3P***

774216-84-1P
RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation);
USES (Uses)
(two-photon absorbing polymerizable compn. and polymn. process thereof)
IT ***500908-05-4P*** ***774611-29-9P***
RL: IMF (Industrial manufacture); PREP (Preparation)
(two-photon absorbing polymerizable compn. and polymn. process thereof)
IT ***54443-93-5P*** ***66142-15-2P*** ***88253-66-1P***
88340-89-0P ***681836-46-4P***
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
(Reactant or reagent)
(two-photon absorbing polymerizable compn. and polymn. process thereof)
IT ***115-80-0*** , Triethyl orthopropionate ***120-92-3*** ,
Cyclopentanone ***273-53-0*** , Benzoxazole ***769-42-6***
927-63-9 ***1120-71-4*** , Propanesultone ***1497-49-0***
4485-89-6 ***4637-24-5*** ***5217-47-0***
29636-96-2 ***165547-54-6*** ***398522-14-0***
RL: RCT (Reactant); RACT (Reactant or reagent)
(two-photon absorbing polymerizable compn. and polymn. process thereof)

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD

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 - (2) Belfield, K; J. Phys. Org. Chem. 2000, V13, P837 CAPLUS
 - (3) Borrer; US 3976493 A 1976 CAPLUS
 - (4) Cumpston, B; Nature 1999, V398, P51 CAPLUS
 - (5) DeVoe; US 6852766 B1 2005 CAPLUS
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L14 ANSWER 8 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:491533 CAPLUS <<LOGINID::20061101>>

DN 139:60200

ED Entered STN: 27 Jun 2003

TI Manufacture of colored plastic optical disks for DVD data storage with
plastic substrates with controlled UV Bonding Index

IN Pai-Paranjape, Vandita; Peak, Steven R.; Schottland, Philippe; Thomas,
Verghese; Weis, Sharon S.

PA General Electric Company, USA

SO PCT Int. Appl., 34 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM G11B007-00

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related
Properties)

Section cross-reference(s): 38, 41

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003052751	A2	20030626	WO 2002-US33503	20021016
	WO 2003052751	A3	20031030		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	US 2003148059	A1	20030807	US 2002-63906	20020522
	US 6673410	B2	20040106		
	AU 2002342079	A1	20030630	AU 2002-342079	20021016
	EP 1459311	A2	20040922	EP 2002-776245	20021016
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,			

IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

JP 2005513694	T2	20050512	JP 2003-553560	20021016
PRAI US 2001-683346	A	20011217		
US 2002-63906	A	20020522		
WO 2002-US33503	W	20021016		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2003052751	ICM	G11B007-00
	IPCI	G11B0007-00 [ICM,7]
	IPCR	B29C0065-48 [N,A]; B29C0065-48 [N,C*]; B29D0017-00 [I,A]; B29D0017-00 [I,C*]; B32B0027-06 [I,A]; B32B0027-06 [I,C*]; C08K0005-00 [I,A]; C08K0005-00 [I,C*]; G11B0007-24 [I,C*]; G11B0007-253 [I,A]; G11B0007-257 [I,A]; G11B0007-26 [I,A]; G11B0007-26 [I,C*]
	ECLA	B29D017/00C; B32B027/06; C08K005/00P4; G11B007/253; G11B007/257; G11B007/26
US 2003148059	IPCI	B32B0003-02 [ICM,7]
	IPCR	B29C0065-48 [N,A]; B29C0065-48 [N,C*]; B29D0017-00 [I,A]; B29D0017-00 [I,C*]; B32B0007-12 [I,A]; B32B0007-12 [I,C*]; B32B0027-08 [I,A]; B32B0027-08 [I,C*]; C08K0005-00 [I,A]; C08K0005-00 [I,C*]; G11B0007-24 [I,C*]; G11B0007-253 [I,A]; G11B0007-257 [I,A]; G11B0007-26 [I,A]; G11B0007-26 [I,C*]
	NCL	428/064.400
	ECLA	B29D017/00C; B32B007/12; B32B027/08; C08K005/00P4; G11B007/253; G11B007/257; G11B007/26
AU 2002342079	IPCI	G11B0007-00 [ICM,7]
	IPCR	B29C0065-48 [N,A]; B29C0065-48 [N,C*]; B29D0017-00 [I,A]; B29D0017-00 [I,C*]; B32B0027-06 [I,A]; B32B0027-06 [I,C*]; C08K0005-00 [I,A]; C08K0005-00 [I,C*]; G11B0007-24 [I,C*]; G11B0007-253 [I,A]; G11B0007-257 [I,A]; G11B0007-26 [I,A]; G11B0007-26 [I,C*]
EP 1459311	IPCI	G11B0007-26 [ICM,7]; G11B0007-24 [ICS,7]
	IPCR	B29C0065-48 [N,A]; B29C0065-48 [N,C*]; B29D0017-00 [I,A]; B29D0017-00 [I,C*]; B32B0027-06 [I,A]; B32B0027-06 [I,C*]; C08K0005-00 [I,A]; C08K0005-00 [I,C*]; G11B0007-24 [I,C*]; G11B0007-253 [I,A]; G11B0007-257 [I,A]; G11B0007-26 [I,A]; G11B0007-26 [I,C*]
JP 2005513694	IPCI	G11B0007-24 [ICM,7]; G11B0007-26 [ICS,7]
	IPCR	B29C0065-48 [N,A]; B29C0065-48 [N,C*]; B29D0017-00 [I,A]; B29D0017-00 [I,C*]; B32B0027-06 [I,A]; B32B0027-06 [I,C*]; C08K0005-00 [I,A]; C08K0005-00 [I,C*]; G11B0007-24 [I,C*]; G11B0007-253 [I,A]; G11B0007-257 [I,A]; G11B0007-26 [I,A]; G11B0007-26 [I,C*]
	FTERM	5D029/KA07; 5D029/KA09; 5D029/KA10; 5D029/KA15; 5D029/KA16; 5D029/KA17; 5D029/KC04; 5D029/RA07; 5D029/RA09; 5D121/AA02; 5D121/AA07; 5D121/DD13
AB	Optical disks comprise at least two plastic substrates with a bonding layer and a data layer provided between the substrates. The read-side substrate contains .gtorsim.0.01 wt.% of colorants and has UV bonding index of .gtorsim.0.5. The optical disks are manufd. by forming a first plastic substrate with .gtorsim.0.01 wt.% colorant and UV bonding index of .gtorsim.0.5, then disposing a data layer between the first plastic substrate and a second substrate, bonding the first plastic substrate to the second plastic substrate with a bonding layer, and curing the bonding layer.	
ST	optical disk plastic substrate colorant UV bonding index curing	
IT	Polyesters, properties	
	RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)	
	(arom., substrates; manuf. of colored plastic optical disks for DVD data storage with plastic substrates with controlled UV Bonding Index)	
IT	Lactones	
	RL: MOA (Modifier or additive use); USES (Uses)	
	(colorants; manuf. of colored plastic optical disks for DVD data storage with plastic substrates with controlled UV Bonding Index)	

IT Unsaturated compounds
 RL: MOA (Modifier or additive use); USES (Uses)
 (***cyanines*** , colorants; manuf. of colored plastic optical disks for DVD data storage with plastic substrates with controlled UV Bonding Index)

IT Coloring materials
 (in plastic substrates; manuf. of colored plastic optical disks for DVD data storage with plastic substrates with controlled UV Bonding Index)

IT Crosslinking
 Molding of plastics and rubbers
 Optical disks
 Optical transmission
 (manuf. of colored plastic optical disks for DVD data storage with plastic substrates with controlled UV Bonding Index)

IT Pigments, nonbiological
 (monoazo and disazo; manuf. of colored plastic optical disks for DVD data storage with plastic substrates with controlled UV Bonding Index)

IT Polyimides, properties
 Polyketones
 Polysulfones, properties
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (polyether-, substrates; manuf. of colored plastic optical disks for DVD data storage with plastic substrates with controlled UV Bonding Index)

IT Polyethers, properties
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (polyimide-, substrates; manuf. of colored plastic optical disks for DVD data storage with plastic substrates with controlled UV Bonding Index)

IT Polyethers, properties
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (polyketone-, substrates; manuf. of colored plastic optical disks for DVD data storage with plastic substrates with controlled UV Bonding Index)

IT Acetals
 Vinyl compounds, properties
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (polymers, substrates; manuf. of colored plastic optical disks for DVD data storage with plastic substrates with controlled UV Bonding Index)

IT Polyethers, properties
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (polysulfone-, substrates; manuf. of colored plastic optical disks for DVD data storage with plastic substrates with controlled UV Bonding Index)

IT Plastics, properties
 RL: DEV (Device component use); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
 (substrate; manuf. of colored plastic optical disks for DVD data storage with plastic substrates with controlled UV Bonding Index)

IT Liquid crystals, polymeric
 (substrates; manuf. of colored plastic optical disks for DVD data storage with plastic substrates with controlled UV Bonding Index)

IT ***Acrylic*** polymers, properties
 Alkyd resins
 Epoxy resins, properties
 Fluoropolymers, properties
 Phenolic resins, properties
 Polyamides, properties
 Polycyanurates
 Polyesters, properties

Polyimides, properties

Polyolefins

Polyoxyphenylenes

Polysilanes

Polysiloxanes, properties

Polysulfones, properties

Polythiophenylenes

Polyurethanes, properties

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(substrates; manuf. of colored plastic optical disks for DVD data storage with plastic substrates with controlled UV Bonding Index)

IT 81-77-6, Indanthrone 81-83-4, Naphthalimide 91-64-5, Coumarin 92-83-1, Xanthene 198-55-0, Perylene 261-31-4, Thioxanthene ***273-53-0***, Benzoxazole 482-89-3, Indigo 522-75-8, Thioindigo 1047-16-1, Quinacridone 31901-98-1D, Naphthalenetetracarboxylic acid, derivs.

RL: MOA (Modifier or additive use); USES (Uses)

(colorants; manuf. of colored plastic optical disks for DVD data storage with plastic substrates with controlled UV Bonding Index)

IT 9002-85-1, Polyvinylidene chloride 9002-86-2, Polyvinyl chloride 9003-17-2, Polybutadiene 9003-20-7, Polyvinyl acetate 9003-53-6, Polystyrene 9003-56-9 13676-54-5, Bis-maleimides 24937-78-8, Ethylenevinyl acetate copolymer 24937-79-9, Polyvinylidene fluoride 24981-14-4, Polyvinyl fluoride 25014-41-9, Polyacrylonitrile 25038-71-5, Ethylenetetrafluoroethylene copolymer 139196-38-6, Benzocyclobutene polymer

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(substrates; manuf. of colored plastic optical disks for DVD data storage with plastic substrates with controlled UV Bonding Index)

L14 ANSWER 9 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2000:875699 CAPLUS <<LOGINID::20061101>>

DN 134:49238

ED Entered STN: 14 Dec 2000

TI Thermal imaging composition and member containing sulfonated IR dye and methods of imaging and printing

IN Fleming, James C.; Leon, Jeffrey W.; Stegman, David A.; Williams, Kevin W.

PA Eastman Kodak Company, USA

SO U.S., 22 pp.

CODEN: USXXAM

DT Patent

LA English

IC ICM G03C001-73

ICS G03C001-76; G03C001-77

INCL 430270100

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6159657	A	20001212	US 1999-387021	19990831
	DE 10042294	A1	20010412	DE 2000-10042294	20000829
	JP 2001130159	A2	20010515	JP 2000-262836	20000831
	US 6537730	B1	20030325	US 2000-652344	20000831
PRAI	US 1999-387021	A	19990831		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 6159657	ICM	G03C001-73
	ICS	G03C001-76; G03C001-77
	INCL	430270100
	IPCI	G03C0001-73 [ICM,7]; G03C0001-76 [ICS,7]; G03C0001-77 [ICS,7]
	IPCR	G03F0007-004 [I,C*]; G03F0007-004 [I,A]; B41C0001-10 [I,C*]; B41C0001-10 [I,A]; B41M0005-36 [I,C*]; B41M0005-36 [I,A]; B41M0005-40 [N,C*]; B41M0005-40 [N,A]; B41N0001-12 [I,C*]; B41N0001-14 [I,A]; C08K0005-00 [I,C*]; C08K0005-00 [I,A]; C08L0101-00

[I,C*]; C08L0101-14 [I,A]; C09B0023-00 [I,C*];
 C09B0023-00 [I,A]; C09K0003-00 [I,C*]; C09K0003-00
 [I,A]; G03F0007-00 [I,C*]; G03F0007-00 [I,A];
 G03F0007-032 [I,C*]; G03F0007-032 [I,A]
 NCL 430/270.100; 430/271.100; 430/278.100; 430/905.000;
 430/926.000; 430/944.000; 430/964.000
 ECLA B41C001/10B; B41M005/36S
 DE 10042294 IPCI G03F0007-09 [ICM,7]; B41C0001-00 [ICS,7]; B41C0001-055
 [ICS,7]; B41C0001-10 [ICS,7]; B41F0007-02 [ICS,7];
 B41F0007-00 [ICS,7,C*]; B41N0001-14 [ICS,7];
 B41N0001-12 [ICS,7,C*]
 IPCR G03F0007-004 [I,C*]; G03F0007-004 [I,A]; B41C0001-10
 [I,C*]; B41C0001-10 [I,A]; B41M0005-36 [I,C*];
 B41M0005-36 [I,A]; B41M0005-40 [N,C*]; B41M0005-40
 [N,A]; B41N0001-12 [I,C*]; B41N0001-14 [I,A];
 C08K0005-00 [I,C*]; C08K0005-00 [I,A]; C08L0101-00
 [I,C*]; C08L0101-14 [I,A]; C09B0023-00 [I,C*];
 C09B0023-00 [I,A]; C09K0003-00 [I,C*]; C09K0003-00
 [I,A]; G03F0007-00 [I,C*]; G03F0007-00 [I,A];
 G03F0007-032 [I,C*]; G03F0007-032 [I,A]
 ECLA B41C001/10B; B41M005/36S
 JP 2001130159 IPCI B41N0001-14 [ICM,7]; B41N0001-12 [ICM,7,C*];
 C08K0005-00 [ICS,7]; C08L0101-14 [ICS,7]; C08L0101-00
 [ICS,7,C*]; C09B0023-00 [ICS,7]; C09K0003-00 [ICS,7];
 G03F0007-00 [ICS,7]; G03F0007-004 [ICS,7]; G03F0007-032
 [ICS,7]
 IPCR G03F0007-004 [I,C*]; G03F0007-004 [I,A]; B41C0001-10
 [I,C*]; B41C0001-10 [I,A]; B41M0005-36 [I,C*];
 B41M0005-36 [I,A]; B41M0005-40 [N,C*]; B41M0005-40
 [N,A]; B41N0001-12 [I,C*]; B41N0001-14 [I,A];
 C08K0005-00 [I,C*]; C08K0005-00 [I,A]; C08L0101-00
 [I,C*]; C08L0101-14 [I,A]; C09B0023-00 [I,C*];
 C09B0023-00 [I,A]; C09K0003-00 [I,C*]; C09K0003-00
 [I,A]; G03F0007-00 [I,C*]; G03F0007-00 [I,A];
 G03F0007-032 [I,C*]; G03F0007-032 [I,A]
 US 6537730 IPCI G03F0007-038 [ICM,7]; G03F0007-20 [ICS,7]; G03C0001-77
 [ICS,7]; B41N0001-08 [ICS,7]; B41N0001-20 [ICS,7];
 B41N0001-00 [ICS,7,C*]
 IPCR G03F0007-004 [I,C*]; G03F0007-004 [I,A]; B41C0001-10
 [I,C*]; B41C0001-10 [I,A]; B41M0005-36 [I,C*];
 B41M0005-36 [I,A]; B41M0005-40 [N,C*]; B41M0005-40
 [N,A]; B41N0001-12 [I,C*]; B41N0001-14 [I,A];
 C08K0005-00 [I,C*]; C08K0005-00 [I,A]; C08L0101-00
 [I,C*]; C08L0101-14 [I,A]; C09B0023-00 [I,C*];
 C09B0023-00 [I,A]; C09K0003-00 [I,C*]; C09K0003-00
 [I,A]; G03F0007-00 [I,C*]; G03F0007-00 [I,A];
 G03F0007-032 [I,C*]; G03F0007-032 [I,A]
 NCL 430/302.000; 101/450.100; 101/454.000; 101/456.000;
 101/457.000; 101/465.000; 101/466.000; 101/467.000;
 430/270.100; 430/281.100; 430/287.100; 430/905.000;
 430/907.000; 430/926.000; 430/944.000; 430/945.000
 ECLA B41C001/10B; B41M005/36S

AB An imaging member, such as a neg.-working printing plate or on-press
 cylinder, can be prepd. with a hydrophilic imaging layer comprised of a
 heat-sensitive hydrophilic polymer having ionic moieties and an IR
 radiation sensitive dye having multiple sulfo groups. The heat-sensitive
 polymer and IR dye can be formulated in water or water-miscible solvents
 to provide highly thermal sensitive imaging compns. In the imaging
 member, the polymer reacts to provide increased hydrophobicity in areas
 exposed to energy that provides or generates heat. For example, heat can
 be supplied by laser irradiation in the IR region of the electromagnetic
 spectrum. The heat-sensitive polymer is considered "switchable" in
 response to heat, and provides a lithog. image without wet processing.

ST lithog printing plates; thermal sensitive polymer ***cyanine*** dye
 IT ***Cyanine*** dyes

Lithographic plates

Thermal printing materials

(thermal imaging compn. and member contg. sulfonated IR dye)

IT 75-18-3, Dimethyl sulfide 75-75-2, Methanesulfonic acid 77-78-1,
 Dimethylsulfate 110-18-9, N,N,N',N'-Tetramethylethylenediamine
 333-27-7, Methyl triflate 594-09-2, Trimethyl phosphine 5188-07-8,
 Sodium methanethiolate 7647-15-6, Sodium bromide, reactions

14216-23-0, 2-(Methylthio)ethylmethacrylate 52747-02-1 57458-41-0
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (thermal imaging compn. and member contg. sulfonated IR dye)
 IT 7268-68-0P ***29636-96-2P*** 99044-67-4P 119261-36-8P
 304023-76-5P 312539-11-0P 312963-52-3P 312965-31-4P 312966-33-9P
 312966-34-0P 312966-36-2P 312966-37-3P 312966-38-4P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (thermal imaging compn. and member contg. sulfonated IR dye)
 IT 66-27-3P, Methyl methanesulfonate 1072-63-5P, 1-Vinylimidazole
 24938-67-8DP, Poly(2,6-dimethyl-1,4-phenylene oxide), brominated, reaction
 products with di-Me sulfide 25067-32-7P 25134-01-4DP,
 Poly(2,6-dimethyl-1,4-phenylene oxide), brominated, reaction products with
 di-Me sulfide 25212-74-2DP, Poly(phenylene sulfide), reaction products
 with methanesulfonic acid and Me triflate, chloride-exchanged
 26100-41-4P, Methyl ***methacrylate*** -4-vinylpyridine copolymer
 110866-77-8P 264255-37-0P 264255-38-1DP, chloride-exchanged
 264255-39-2DP, ion exchange with formic acid 264255-78-9DP, ion exchange
 with formic acid 264255-79-0DP, ion exchange with formic acid
 304023-71-0DP, ion exchange from chloride to acetate or fluoride
 304023-71-0P 304023-76-5DP, ion exchange from methylsulfate to chloride
 312539-12-1P 312966-33-9DP, ion exchange from bromide to acetate
 312966-40-8DP, ion exchange from Me sulfate to chloride
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (thermal imaging compn. and member contg. sulfonated IR dye)
 IT 100356-86-3P 113995-59-8P 119261-38-0P 262283-81-8P 262283-83-0P
 312963-46-5P 312963-48-7P 312963-49-8P 312963-50-1P 312963-51-2P
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)
 (thermal imaging compn. and member contg. sulfonated IR dye)

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE

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- (2) Anon; WO 9209934 1992 CAPLUS
- (3) Anon; EP 0652483 A1 1995 CAPLUS
- (4) Anon; Research Disclosure, Item 19201 1980
- (5) Esumi; US 4634659 1987 CAPLUS
- (6) Etoh; US 4405705 1983 CAPLUS
- (7) Gelbart; US 5713287 1998
- (8) Laganis; US 4882265 1989 CAPLUS
- (9) Lee; US 4548893 1985 CAPLUS
- (10) Leenders; US 5378580 1995 CAPLUS
- (11) Lewis; US 5339737 1994
- (12) Lewis; US 5353705 1994
- (13) Lewis; US 5385092 1995
- (14) Ma; US 5512418 1996 CAPLUS
- (15) Nowak; US 35512 1997
- (16) Pacansky; US 4081572 1978 CAPLUS
- (17) Schwartz; US 4693958 1987 CAPLUS
- (18) Uhlig; US 4034183 1977 CAPLUS
- (19) West; US 5107068 1992 CAPLUS

L14 ANSWER 10 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2000:667688 CAPLUS <<LOGINID::20061101>>

DN 133:351503

ED Entered STN: 25 Sep 2000

TI Photoelectric conversion properties of nanocrystalline TiO2 electrodes
 sensitized with hemicyanine derivatives

AU Wang, Zhong-Sheng; Li, Fu-You; Huang, Chun-Hui; Wang, Lu; Wei, Min; Jin,
 Lin-Pei; Li, Nan-Qiang

CS State Key Laboratory of Rare Earth Materials Chemistry and Applications
 Peking University-The University of Hong Kong Joint Laboratory in Rare
 Earth Materials and Bioinorganic Chemistry, Peking University, Beijing,
 100871, Peop. Rep. China

SO Journal of Physical Chemistry B (2000), 104(41), 9676-9682
 CODEN: JPCBFK; ISSN: 1089-5647

PB American Chemical Society

DT Journal

LA English

CC 41-11 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic
 Sensitizers)

Section cross-reference(s): 27, 52, 74

AB Four sulfobetaine hemicyanine dyes, (E)-N-(3-sulfoniopropyl)-4-[2-[4-(dimethylamino)phenyl]ethenyl]pyridinium, (E)-N-(3-sulfoniopropyl)-4-[2-[4-(dimethylamino)phenyl]ethenyl]quinolinium (QS), (E)-N-(3-sulfoniopropyl)-4-[2-[4-(N-hexadecyl-N-methylamino)phenyl]ethenyl]pyridinium, and (E)-N-(3-sulfoniopropyl)-4-[2-[4-(N-hexadecyl-N-methylamino)phenyl]ethenyl]quinolinium, have been synthesized and characterized with regard to their absorption and electrochem. properties. Photoelectrochem. expts. show that these hemicyanine dyes with D.-pi.-A systems can yield efficient charge sepn. under illumination of simulated solar light. The N-alkyl chain has a remarkable effect on dye adsorbence, incident photon-to-electron conversion efficiency, and overall energy conversion yield. The overall yield is approx. doubled when the Me group replaces the hexadecyl chain. The photocurrent action spectrum of QS displayed a broad incident photon-to-electron conversion efficiency with a 33.8% max., and a thin-layer sandwich-type solar cell based on nanocryst. TiO2 film modified with QS produced about a 2% overall yield. For the first time, a photovoltaic liq.-junction solar cell based on nanostructured TiO2 electrodes sensitized by hemicyanine dyes is reported.

ST photoelec conversion hemicyanine dye titania electrode

IT Photocurrent
(action spectra; photoelec. conversion properties of nanocryst. TiO2 electrodes sensitized with hemicyanine dyes)

IT Photoelectric devices
(converters; photoelec. conversion properties of nanocryst. TiO2 electrodes sensitized with hemicyanine dyes)

IT Absorption spectra
Conduction band
Photovoltage
(of nanocryst. TiO2 electrodes sensitized with hemicyanine dyes)

IT Electric ***current*** -potential relationship
(***photo*** -; of nanocryst. TiO2 electrodes sensitized with hemicyanine dyes)

IT Adsorbed substances
Nanocrystalline materials
Photoelectrochemical cells
Photoelectrodes
Solar cells
(photoelec. conversion properties of nanocryst. TiO2 electrodes sensitized with hemicyanine dyes)

IT Redox reaction
(photoelectrochem.; photoelec. conversion properties of nanocryst. TiO2 electrodes sensitized with hemicyanine dyes)

IT ***Cyanine*** dyes
(prepn. of sulfobetaine hemicyanine dyes for sensitization of photoelec. conversion electrodes)

IT Sulfobetaines
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(prepn. of sulfobetaine hemicyanine dyes for sensitization of photoelec. conversion electrodes)

IT 160915-43-5P 305344-24-5P 305344-25-6P 305344-26-7P
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(dye; photoelec. conversion properties of nanocryst. TiO2 electrodes sensitized with hemicyanine dyes)

IT 13463-67-7, Titanium dioxide, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(photoelec. conversion properties of nanocryst. TiO2 electrodes sensitized with hemicyanine dyes)

IT 100-10-7, 4-(Dimethylamino)benzaldehyde 108-89-4, 4-Methylpyridine 491-35-0, 4-Methylquinoline ***1120-71-4***, 1,3-Propane sultone 95808-40-5, 4-(N-Hexadecyl-N-methylamino)benzaldehyde
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material; prepn. of sulfobetaine hemicyanine dyes for sensitization of photoelec. conversion electrodes)

RE.CNT 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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L14 ANSWER 11 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1999:219866 CAPLUS <<LOGINID::20061101>>

DN 130:283724

ED Entered STN: 08 Apr 1999

TI Storage-stable hypohalite bleaching compositions containing a brightener
and a ***radical*** scavenger for laundry with improved whiteness

IN Todini, Oreste; Agostini, Andrea; Grande, Giovanni

PA Procter + Gamble Company, USA

SO Eur. Pat. Appl., 25 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C11D003-395

ICS C11D003-42

CC 46-6 (Surface Active Agents and Detergents)

Section cross-reference(s): 40

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 905224	A1	19990331	EP 1997-870139	19970919
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	WO 9915616	A1	19990401	WO 1998-IB1345	19980828
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9887447	A1	19990412	AU 1998-87447	19980828
	EP 1017778	A1	20000712	EP 1998-938857	19980828
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
	TR 200001432	T2	20010122	TR 2000-200001432	19980828
	ZA 9808577	A	19990319	ZA 1998-8577	19980918

PRAI EP 1997-870139	A	19970919
WO 1998-IB1345	W	19980828

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 905224	ICM	C11D0003-395
	ICS	C11D0003-42
	IPCI	C11D0003-395 [ICM,6]; C11D0003-42 [ICS,6]; C11D0003-40 [ICS,6,C*]
	IPCR	C11D0003-20 [I,A]; C11D0003-20 [I,C*]; C11D0003-26 [I,A]; C11D0003-26 [I,C*]; C11D0003-34 [I,A]; C11D0003-34 [I,C*]; C11D0003-395 [I,A]; C11D0003-395 [I,C*]; C11D0003-40 [I,C*]; C11D0003-42 [I,A]
	ECLA	C11D0003/20E; C11D0003/26; C11D0003/34H; C11D0003/395H; C11D0003/42
WO 9915616	IPCI	C11D0003-395 [ICM,6]; C11D0003-42 [ICS,6]; C11D0003-40 [ICS,6,C*]
	IPCR	C11D0003-20 [I,A]; C11D0003-20 [I,C*]; C11D0003-26 [I,A]; C11D0003-26 [I,C*]; C11D0003-34 [I,A]; C11D0003-34 [I,C*]; C11D0003-395 [I,A]; C11D0003-395 [I,C*]; C11D0003-40 [I,C*]; C11D0003-42 [I,A]
	ECLA	C11D0003/20E; C11D0003/26; C11D0003/34H; C11D0003/395H; C11D0003/42
AU 9887447	IPCI	C11D0003-395 [ICM,6]; C11D0003-42 [ICS,6]; C11D0003-40 [ICS,6,C*]
	IPCR	C11D0003-20 [I,A]; C11D0003-20 [I,C*]; C11D0003-26 [I,A]; C11D0003-26 [I,C*]; C11D0003-34 [I,A]; C11D0003-34 [I,C*]; C11D0003-395 [I,A]; C11D0003-395 [I,C*]; C11D0003-40 [I,C*]; C11D0003-42 [I,A]
EP 1017778	IPCI	C11D0003-395 [ICM,6]; C11D0003-42 [ICS,6]; C11D0003-40 [ICS,6,C*]
	IPCR	C11D0003-395 [I,C*]; C11D0003-395 [I,A]; C11D0003-40 [I,C*]; C11D0003-42 [I,A]
TR 200001432	IPCI	C11D0003-395 [ICM,7]; C11D0003-42 [ICS,7]; C11D0003-40 [ICS,7,C*]
ZA 9808577	IPCI	D06L [ICM,6]; C11D [ICS,6]
	IPCR	C11D0003-20 [I,A]; C11D0003-20 [I,C*]; C11D0003-26 [I,A]; C11D0003-26 [I,C*]; C11D0003-34 [I,A]; C11D0003-34 [I,C*]; C11D0003-395 [I,A]; C11D0003-395 [I,C*]; C11D0003-40 [I,C*]; C11D0003-42 [I,A]

OS MARPAT 130:283724

AB Liq. hypohalite bleach-contg. compns. comprising a brightener and a ***radical*** scavenger give effective fabric whiteness upon aging of the compns. Thus, a compn. comprising NaOCl 3.5, NaOH 1.25, Na2CO3 3.0, sodium silicate 0.5, benzoic acid 0.5, sodium alkyltriethoxy sulfate 7.0, methoxybenzoate 0.5, Tinopal PLC 0.01, sodium tripolyphosphate 0.1, and water to 100% give good whiteness performance in neat or dil. conditions after 3 mo. at room temp.

ST storage stable hypohalite bleaching compn; laundry whiteness brightener hypohalite bleaching compn; ***radical*** scavenger brightener hypohalite bleaching compn; methoxybenzoate ***radical*** scavenger hypohalite bleaching compn; sulfobenzenefuranylbiphenyl brightener hypohalite bleaching compn

IT Brightening (agents; storage-stable hypohalite bleaching compns. contg. a brightener and a ***radical*** scavenger for laundry with improved whiteness)

IT Sulfonates Sulfonates RL: TEM (Technical or engineered material use); USES (Uses) (arenesulfonates, ***radical*** scavenger; storage-stable hypohalite bleaching compns. contg. a brightener and a ***radical*** scavenger for laundry with improved whiteness)

IT Carboxylic acids, uses RL: TEM (Technical or engineered material use); USES (Uses) (arom., salts, ***radical*** scavenger; storage-stable hypohalite bleaching compns. contg. a brightener and a ***radical*** scavenger for laundry with improved whiteness)

IT Carboxylic acids, uses RL: TEM (Technical or engineered material use); USES (Uses) (brightener; storage-stable hypohalite bleaching compns. contg. a brightener and a ***radical*** scavenger for laundry with improved whiteness)

whiteness)

IT Unsaturated compounds
 RL: TEM (Technical or engineered material use); USES (Uses)
 (***cyanines*** , methine; storage-stable hypohalite bleaching
 compns. contg. a brightener and a ***radical*** scavenger for
 laundry with improved whiteness)

IT Heterocyclic compounds
 RL: TEM (Technical or engineered material use); USES (Uses)
 (nitrogen, five-membered, methine; storage-stable hypohalite bleaching
 compns. contg. a brightener and a ***radical*** scavenger for
 laundry with improved whiteness)

IT Bleaching agents
 Radical scavengers
 Textiles
 (storage-stable hypohalite bleaching compns. contg. a brightener and a
 radical scavenger for laundry with improved whiteness)

IT Heterocyclic compounds
 RL: TEM (Technical or engineered material use); USES (Uses)
 (storage-stable hypohalite bleaching compns. contg. a brightener and a
 radical scavenger for laundry with improved whiteness)

IT Aromatic compounds
 Aromatic compounds
 RL: TEM (Technical or engineered material use); USES (Uses)
 (sulfonates, ***radical*** scavenger; storage-stable hypohalite
 bleaching compns. contg. a brightener and a ***radical*** scavenger
 for laundry with improved whiteness)

IT 51-17-2, Benzimidazole 81-83-4D, Naphthalimide, derivs. 91-64-5D,
 Coumarin, derivs. 271-89-6D, Benzofuran, derivs. ***273-53-0D*** ,
 Benzoxazole, derivs. 588-59-0D, Stilbene, derivs. 1016-05-3,
 Dibenzothiophene-5,5-dioxide 36118-45-3D, Pyrazoline, derivs.
 222295-55-8, Optiblanc BRB 222295-63-8, Tinopal PLC
 RL: TEM (Technical or engineered material use); USES (Uses)
 (brightener; storage-stable hypohalite bleaching compns. contg. a
 brightener and a ***radical*** scavenger for laundry with improved
 whiteness)

IT 71-43-2D, Benzene, derivs., uses 88-99-3, 1,2-Benzenedicarboxylic acid,
 uses 91-20-3D, Naphthalene, derivs., uses 100-09-4D, 4-Methoxybenzoic
 acid, salts 104-15-4, uses 542-92-7D, Cyclopentadiene, derivs..
 552-16-9, 2-Nitrobenzoic acid 2781-85-3, Cyclopropene
 RL: TEM (Technical or engineered material use); USES (Uses)
 (***radical*** scavenger; storage-stable hypohalite bleaching
 compns. contg. a brightener and a ***radical*** scavenger for
 laundry with improved whiteness)

IT 7681-52-9
 RL: TEM (Technical or engineered material use); USES (Uses)
 (storage-stable hypohalite bleaching compns. contg. a brightener and a
 radical scavenger for laundry with improved whiteness)

L14 ANSWER 12 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1998:794976 CAPLUS <<LOGINID::20061101>>

DN 130:20606

ED Entered STN: 21 Dec 1998

TI Sonodynamic therapy using an ultrasound sensitizer compound

IN Alfheim, Jan Alan; Henrichs, Paul Mark; Hohenschuh, Eric Paul; Johannesen,
 Edvin Wilhelm; Sanderson, William Anthony; Snow, Robert Allen

PA Nycomed Imaging AS, Norway

SO PCT Int. Appl., 192 pp.

CODEN: PIXXD2

DT Patent

LA English

IC A61K041-00

CC 1-12 (Pharmacology)

Section cross-reference(s): 8, 35, 63

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9852609	A1	19981126	WO 1998-GB1444	19980519
	W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK,				
	EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP,				
	KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ,				
	PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG,				
	US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES,
FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI,
CM, GA, GN, ML, MR, NE, SN, TD, TG

AU 9874438	A1	19981211	AU 1998-74438	19980519
EP 979104	A1	20000216	EP 1998-921658	19980519
EP 979104	B1	20040915		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001525845	T2	20011211	JP 1998-550117	19980519
AT 275971	E	20041015	AT 1998-921658	19980519
US 6498945	B1	20021224	US 1999-435616	19991108
PRAI GB 1997-10049	A	19970519		
US 1997-48487P	P	19970603		
WO 1998-GB1444	W	19980519		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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WO 9852609	IC	A61K041-00
	IPCI	A61K0041-00
	IPCR	A61K0041-00 [I,C*]; A61K0041-00 [I,A]; A61K0047-48 [I,C*]; A61K0047-48 [I,A]
	ECLA	A61K041/00M4; A61K047/48H4P
AU 9874438	IPCI	A61K0041-00 [ICM,6]
	IPCR	A61K0047-06 [I,C*]; A61K0047-06 [I,A]; A61K0041-00 [I,C*]; A61K0041-00 [I,A]; A61K0049-00 [I,C*]; A61K0049-00 [I,A]; A61P0035-00 [I,C*]; A61P0035-00 [I,A]; A61P0043-00 [I,C*]; A61P0043-00 [I,A]
EP 979104	IPCI	A61K0041-00 [ICM,6]
	IPCR	A61K0047-06 [I,C*]; A61K0047-06 [I,A]; A61K0041-00 [I,C*]; A61K0041-00 [I,A]; A61K0049-00 [I,C*]; A61K0049-00 [I,A]; A61P0035-00 [I,C*]; A61P0035-00 [I,A]; A61P0043-00 [I,C*]; A61P0043-00 [I,A]
JP 2001525845	IPCI	A61K0041-00 [ICM,7]; A61K0047-06 [ICS,7]; A61K0049-00 [ICS,7]; A61P0035-00 [ICS,7]; A61P0043-00 [ICS,7]
	IPCR	A61K0041-00 [I,A]; A61K0041-00 [I,C*]; A61K0047-06 [I,A]; A61K0047-06 [I,C*]; A61K0049-00 [I,A]; A61K0049-00 [I,C*]; A61P0035-00 [I,A]; A61P0035-00 [I,C*]; A61P0043-00 [I,A]; A61P0043-00 [I,C*]
AT 275971	IPCI	A61K0041-00 [ICM,7]
US 6498945	IPCI	A61B0005-00 [ICM,7]; A61N0007-00 [ICS,7]; A61K0041-00 [ICS,7]
	IPCR	A61K0041-00 [I,C*]; A61K0041-00 [I,A]; A61K0047-48 [I,C*]; A61K0047-48 [I,A]
	NCL	600/407.000; 424/009.100; 600/431.000; 601/002.000; 604/022.000
	ECLA	A61K041/00M4; A61K047/48H4P

AB A method is provided for treatment of the human or animal body by sonodynamic therapy in which a sensitizer agent is administered and the body is exposed to ultrasound to achieve a cytopathogenic effect at a site therein, wherein the sensitizer agent is a physiol. tolerable substance which is capable of enhancing the cytopathogenic efficacy of said sonodynamic therapy. Preferably, the sensitizer agent is a water-sol. polymer compd. or a conjugate thereof. Prepn. of compds. of the invention is described.

ST polymer conjugate sensitizer prep ultrasound sonodynamic therapy

IT Polymers, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(block; ultrasound sensitizer compds. for sonodynamic therapy)

IT Polymers, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(conjugates; ultrasound sensitizer compds. for sonodynamic therapy)

IT Unsaturated compounds

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(***cyanines*** , and cyaninoids; ultrasound sensitizer compds. for sonodynamic therapy)

IT Polyoxyalkylenes, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(dimyristylphosphatidylethanolamine reaction products, liposome with; ultrasound sensitizer compds. for sonodynamic therapy)

IT Toxins

RL: RCT (Reactant); RACT (Reactant or reagent)
(enterotoxins, heat-stable, STI, E. coli; ultrasound sensitizer compds.)

for sonodynamic therapy)

IT Organic compounds, biological studies
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (iodinated; ultrasound sensitizer compds. for sonodynamic therapy)

IT Drug delivery systems
 (liposomes; ultrasound sensitizer compds. for sonodynamic therapy)

IT Drug delivery systems
 (nanoparticles, air-exposed fluorescein nanoparticles; ultrasound sensitizer compds. for sonodynamic therapy)

IT Dyes
 (polymer reaction products; ultrasound sensitizer compds. for sonodynamic therapy)

IT Polyoxyalkylenes, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction; ultrasound sensitizer compds. for sonodynamic therapy)

IT Sound and Ultrasound
 Therapy
 (sonodynamic therapy; ultrasound sensitizer compds. for sonodynamic therapy)

IT Drug delivery systems
 (suspensions; ultrasound sensitizer compds. for sonodynamic therapy)

IT ***Cyanine*** dyes
 Imaging agents
 Lymph node
 Surfactants
 Tomography
 (ultrasound sensitizer compds. for sonodynamic therapy)

IT ***Radicals***, biological studies
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (ultrasound sensitizer compds. for sonodynamic therapy)

IT Hydroperoxides
 Phosphatidylcholines, biological studies
 Polyamides, biological studies
 Polymers, biological studies
 Polyoxyalkylenes, biological studies
 Polysulfonamides
 Polyureas
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (ultrasound sensitizer compds. for sonodynamic therapy)

IT Imaging agents
 Imaging agents
 (x-ray, contrast; ultrasound sensitizer compds. for sonodynamic therapy)

IT 2321-07-5, Fluorescein
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (air-exposed nanoparticles; ultrasound sensitizer compds. for sonodynamic therapy)

IT 85-86-9, Sudan III
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (air-exposed stable emulsion; ultrasound sensitizer compds. for sonodynamic therapy)

IT 7553-56-2, Iodine, biological studies
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (iodinated org. compds.; ultrasound sensitizer compds. for sonodynamic therapy)

IT 50-18-0, Cyclophosphamide 3301-79-9, 6-Carboxyfluorescein 3599-32-4, Indocyanine green 25322-68-3D, PEG, dimyristylphosphatidylethanolamine reaction products 138729-62-1D, PEG reaction products
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (liposome with; ultrasound sensitizer compds. for sonodynamic therapy)

IT 10025-74-8DP, Dysprosium trichloride, reaction products with DTPA-PEG deriv. 23911-26-4DP, reaction products with PEG deriv. 24991-53-5P 35164-96-6P 55952-31-3P 76578-90-0P 109049-12-9DP, derivs., reaction products 157195-06-7DP, reaction products with PEG deriv. 157195-07-8DP, reaction products with PEG deriv. 186186-79-8P 216451-87-5P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prepn. and reaction; ultrasound sensitizer compds. for sonodynamic therapy)

IT 62-53-3, Aniline, reactions 74-89-5, Methylamine, reactions 98-59-9,

p-Toluenesulfonyl chloride 98-67-9, Phenol-4-sulfonic acid 107-15-3,
 Ethylenediamine, reactions 605-65-2, Dansyl chloride ***1120-71-4***
 , 1,3-Propane sultone 3326-32-7, 5-Fluorescein isothiocyanate
 10025-74-8, Dysprosium trichloride 10138-52-0, Gadolinium (III) chloride
 10256-43-6 17159-79-4, Ethyl 4-oxocyclohexanecarboxylate 23288-60-0
 23911-26-4, Diethylenetriaminepentaacetic acid dianhydride 25322-68-3
 41532-84-7, 1,1,2-Trimethyl-1H-benz[e]indole 61010-04-6 62796-29-6
 157195-06-7 157195-07-8 181827-37-2 184351-56-2 216451-88-6
 216483-45-3D, reaction product with T908
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction; ultrasound sensitizer compds. for sonodynamic therapy)

IT 151810-98-9
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological
 study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
 (Uses)
 (ultrasound sensitizer compds. for sonodynamic therapy)

IT 603-35-0, Triphenyl phosphine, reactions 1336-21-6, Ammonium hydroxide
 7719-09-7, Thionyl chloride 26628-22-8, Sodium azide 27072-45-3,
 Fluorescein isothiocyanate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (ultrasound sensitizer compds. for sonodynamic therapy)

IT 106392-12-5, Pluronic F-108
 RL: RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT
 (Reactant or reagent); USES (Uses)
 (ultrasound sensitizer compds. for sonodynamic therapy)

IT 216451-89-7P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (ultrasound sensitizer compds. for sonodynamic therapy)

IT 574-93-6DP, Phthalocyanine, derivs., technetium-99 complexes
 7440-54-2DP, Gadolinium, complex with DTPA- diamino hexane copolymer,
 fluorescein-terminated, biological studies 10138-52-0DP, Gadolinium
 (III) chloride, complexes with DTPA-PEG deriv. 14133-76-7DP,
 Technetium-99, phthalocyanine complexes, biological studies
 27072-45-3DP, Fluorescein isothiocyanate, Tetronic 908 reaction products
 62796-29-6DP, reaction products with polyoxyalkylene diamines
 106392-12-5DP, Ethylene oxide-propylene oxide block copolymer, diamine
 deriv. 106392-12-5DP, reaction products with thionyl chloride, sodium
 azide, tri-Ph phosphine, ammonium hydroxide and rhodamine B sulfonyl
 chloride 110617-70-4DP, Tetronic 908, fluorescein isothiocyanate
 reaction products 181827-35-0P 186186-79-8DP, gadolinium complex,
 fluorescein-terminated 216451-83-1P 216451-84-2P 216451-85-3P
 216451-86-4P 216451-90-0P 216483-45-3P
 RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological
 study); PREP (Preparation); USES (Uses)
 (ultrasound sensitizer compds. for sonodynamic therapy)

IT 574-93-6D, Phthalocyanine, derivs. 9004-95-9, Brij 58 19764-96-6
 25301-02-4, Tyloxapol 177910-36-0, P79
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (ultrasound sensitizer compds. for sonodynamic therapy)

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Ekos Corp; WO 9718851 A 1997
- (2) Hitachi Ltd; JP 04054132 A 1992 CAPLUS
- (3) Hitachi Ltd; WO 9801131 A 1998 CAPLUS
- (4) Kessel, D; JOURNAL OF PHOTOCHEMISTRY AND PHOTOBIOLOGY B BIOLOGY 1995,
 V28(3), P219 CAPLUS
- (5) Kohshiro, U; US 4971991 A 1990 CAPLUS
- (6) Unger, E; WO 9428874 A 1994 CAPLUS
- (7) Unger, E; WO 9515118 A 1995 CAPLUS
- (8) Worthington, A; ULTRASOUND MED BIOL 1997, V23(7), PP1095
- (9) Yumita, N; CANCER LETT 1997, V112(1), PP79

L14 ANSWER 13 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1996:605798 CAPLUS <<LOGINID::20061101>>

DN 125:250363

ED Entered STN: 11 Oct 1996

TI A new synthetic approach for nonlinear optical chromophores possessing
 enhanced thermal stability

AU Shu, Ching-Fong; Tsai, Wen-Jen; Jen, Alex K-Y.

CS Dep. Applied Chem., Natl. Chiao Tung Univ., Taichung, Peop. Rep. China

SO Tetrahedron Letters (1996), 37(39), 7055-7058

CODEN: TELEAY; ISSN: 0040-4039

PB Elsevier
 DT Journal
 LA English
 CC 41-11 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
 Section cross-reference(s): 73
 AB A synthetic strategy for NLO chromophores contg. a cyclic-locked, conjugated triene segment has been developed. The incorporation of the ***ethylenic*** bonds into a 6-membered ring resulted in enhanced thermal stabilities of the chromophores.
 ST nonlinear optical chromophore thermal stability
 IT Chromophores and Chromophoric systems
 Dyes, ***cyanine***
 (prepn. of nonlinear optical chromophores possessing enhanced thermal stability)
 IT Optical materials
 (nonlinear, prepn. of nonlinear optical chromophores possessing enhanced thermal stability)
 IT 182246-86-2P, 3-[4-(Diethylamino)styryl]-5,5-dimethyl-2-cyclohexen-1-one
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (precursor; prepn. of nonlinear optical chromophores possessing enhanced thermal stability)
 IT 27570-66-7P 182246-77-1P 182246-78-2P 182246-79-3P 182246-80-6P 182246-81-7P 182246-82-8P 182246-83-9P 182246-84-0P 182246-85-1P
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (prepn. of nonlinear optical chromophores possessing enhanced thermal stability)
 IT 78-59-1, Isophorone 109-77-3, Malononitrile 120-21-8, 4-(Diethylamino)benzaldehyde 670-54-2, Tetracyanoethylene, reactions ***5217-47-0***, 1,3-Diethyl-2-thiobarbituric acid 182246-87-3, 2-Thiophenemethylphosphonic acid
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (starting material; prepn. of nonlinear optical chromophores possessing enhanced thermal stability)

L14 ANSWER 14 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1994:120579 CAPLUS <<LOGINID::20061101>>
 DN 120:120579
 ED Entered STN: 05 Mar 1994
 TI Dyes comprising thioether macrocycles
 IN Benard, Rejane; Friour, Gerard Amede Desire; Martin, Didier Jean; Riveccie, Marcel Louis Pierre
 PA Kodak-Pathe, Fr.; Eastman Kodak Co.
 SO PCT Int. Appl., 31 pp.
 CODEN: PIXXD2

DT Patent
 LA English
 IC ICM G03C001-12
 ICS C09B023-00
 CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9308505	A1	19930429	WO 1992-EP2359	19921014
W: JP, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE				
FR 2682498	A1	19930416	FR 1991-12942	19911015
EP 608312	A1	19940803	EP 1992-921617	19921014
EP 608312	B1	19950524		
R: DE, FR, GB				
JP 07500926	T2	19950126	JP 1992-507420	19921014
US 5500337	A	19960319	US 1994-211790	19940415
PRAI FR 1991-12942	A	19911015		
WO 1992-EP2359	W	19921014		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9308505	ICM	G03C001-12
	ICS	C09B023-00

IPCI G03C0001-12 [ICM,5]; C09B0023-00 [ICS,5]
 IPCR C09B0023-00 [I,A]; C09B0023-00 [I,C*]; C09B0023-04
 [I,A]; G03C0001-005 [I,C*]; G03C0001-005 [I,A];
 G03C0001-12 [I,C*]; G03C0001-12 [I,A]; G03C0001-14
 [I,C*]; G03C0001-16 [I,A]
 FR 2682498 IPCI G03C0001-26 [ICM,5]; G03C0001-12 [ICM,5,C*];
 C09B0023-16 [ICS,5]; C09B0023-00 [ICS,5,C*]
 IPCR C09B0023-00 [I,A]; C09B0023-00 [I,C*]; C09B0023-04
 [I,A]; G03C0001-005 [I,C*]; G03C0001-005 [I,A];
 G03C0001-12 [I,C*]; G03C0001-12 [I,A]; G03C0001-14
 [I,C*]; G03C0001-16 [I,A]
 EP 608312 IPCI G03C0001-12 [ICM,5]; C09B0023-00 [ICS,5]
 IPCR C09B0023-00 [I,A]; C09B0023-00 [I,C*]; C09B0023-04
 [I,A]; G03C0001-005 [I,C*]; G03C0001-005 [I,A];
 G03C0001-12 [I,C*]; G03C0001-12 [I,A]; G03C0001-14
 [I,C*]; G03C0001-16 [I,A]
 JP 07500926 IPCI G03C0001-12 [ICM,6]; C09B0023-00 [ICS,6]
 US 5500337 IPCI G03C0001-12 [ICM,6]; G03C0001-14 [ICS,6]
 IPCR C09B0023-00 [I,A]; C09B0023-00 [I,C*]; C09B0023-04
 [I,A]; G03C0001-005 [I,C*]; G03C0001-005 [I,A];
 G03C0001-12 [I,C*]; G03C0001-12 [I,A]; G03C0001-14
 [I,C*]; G03C0001-16 [I,A]
 NCL 430/570.000; 430/581.000; 430/583.000; 430/584.000;
 430/585.000; 430/587.000; 430/591.000; 430/593.000;
 430/595.000; 546/135.000; 548/100.000; 548/156.000;
 548/219.000; 548/305.700
 AB Spectral sensitizing ***polymethine*** dyes for use in Ag halide
 photog. materials comprise .gtoreq.1 macrocyclic thioether
 radicals with .gtoreq.1 S atom and .gtoreq.1 O atom, each S or O
 atom being sepd. from another S or O atom by an alkylene group comprising
 .gtoreq.2 C atoms. The sensitizing dyes greatly improve the sensitivity
 of the photog. materials while reducing residual dye stain formation.
 ST ***polymethine*** dye macrocyclic thioether photog sensitizer
 IT Photographic sensitizers
 (spectral, ***polymethine*** dyes contg. intracyclic thioether
 function macrocycle groups as)
 IT 152843-80-6 152843-82-8 152843-84-0 152843-86-2 152843-88-4
 152843-90-8
 RL: TEM (Technical or engineered material use); USES (Uses)
 (photog. spectral sensitizer)
 IT 10234-40-9P 53219-99-1P 152843-63-5P 152843-64-6P 152843-65-7P
 152843-66-8P 152843-67-9P 152843-69-1P 152843-70-4P 152843-71-5P
 152843-72-6P 152843-74-8P 152843-75-9P 152843-76-0P 152843-78-2P
 152870-45-6P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (prepn. and reaction of, in prep. ***polymethine*** dye photog.
 sensitizer)
 IT ***1120-71-4*** 3570-55-6 4329-95-7 14970-87-7 16069-36-6,
 Dicyclohexyl[18]-crown-6 55425-51-9
 RL: USES (Uses)
 (reaction of, in prep. ***polymethine*** dye photog. sensitizer)
 IT 120-80-9, 1,2-Benzenediol, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, in prep. ***polymethine*** dye photog. sensitizer)
 L14 ANSWER 15 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1993:673408 CAPLUS <<LOGINID::20061101>>
 DN 119:273408
 ED Entered STN: 25 Dec 1993
 TI Functionalized merocyanine dyes, polymers incorporating such dyes, and
 their use
 IN Francis, Cecil V.; Cross, Elisa M.; Harelstad, Roberta E.; Korkowski, Paul
 F.; Leung, Peter C.; Macomber, David W.; Tiers, George V. D.; Trend, John
 E.
 PA Minnesota Mining and Manufacturing Co., USA
 SO PCT Int. Appl., 79 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC C02F001-35; C09B023-00
 CC 41-6 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic

Sensitizers)

Section cross-reference(s): 35, 73

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9315596	A2	19930805	WO 1992-US10790	19921211
	WO 9315596	A3	19950302		
	W: CA, JP, KR				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 5256784	A	19931026	US 1992-822168	19920116
	EP 621962	A1	19941102	EP 1993-901310	19921211
	R: DE, FR, GB, IT, NL				
	JP 07505963	T2	19950629	JP 1992-513198	19921211
PRAI	US 1992-822168	A	19920116		
	WO 1992-US10790	W	19921211		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9315596	IC	C02F001-35; C09B023-00
	IPCI	C02F0001-35; C09B0023-00
	IPCR	G02F0001-35 [I,A]; C07C0265-00 [I,C*]; C07C0265-12 [I,A]; C07C0275-00 [I,C*]; C07C0275-30 [I,A]; C07D0239-00 [I,C*]; C07D0239-60 [I,A]; C07D0261-00 [I,C*]; C07D0261-12 [I,A]; C07D0277-00 [I,C*]; C07D0277-20 [I,A]; C07D0277-54 [I,A]; C07D0295-00 [I,C*]; C07D0295-10 [I,A]; C07D0311-00 [I,C*]; C07D0311-92 [I,A]; C09B0011-00 [I,C*]; C09B0011-02 [I,A]; C09B0023-00 [I,C*]; C09B0023-00 [I,A]; C09B0023-02 [I,A]; C09B0023-14 [I,A]; C09B0029-00 [I,C*]; C09B0029-00 [I,A]; C09B0043-00 [I,C*]; C09B0043-40 [I,A]; C09B0055-00 [I,C*]; C09B0055-00 [I,A]; C09K0003-00 [I,C*]; C09K0003-00 [I,A]; G02F0001-35 [I,C*]; G02F0001-355 [I,A]; G02F0001-361 [I,A]
	ECLA	C07C265/12; C07C275/30; C09B011/02; C09B023/02; C09B023/14; C09B029/00H4; C09B043/40; C09B055/00C; G02F001/361B; G02F001/361B2; G02F001/361D2; G02F001/361F; G02F001/361F4
US 5256784	IPCI	C09B0062-245 [ICM,5]; C09B0062-02 [ICM,5,C*]; C09B0023-04 [ICS,5]; C09B0023-02 [ICS,5]; C09B0023-06 [ICS,5]; C09B0023-00 [ICS,5,C*]
	IPCR	G02F0001-35 [I,A]; C07C0265-00 [I,C*]; C07C0265-12 [I,A]; C07C0275-00 [I,C*]; C07C0275-30 [I,A]; C07D0239-00 [I,C*]; C07D0239-60 [I,A]; C07D0261-00 [I,C*]; C07D0261-12 [I,A]; C07D0277-00 [I,C*]; C07D0277-20 [I,A]; C07D0277-54 [I,A]; C07D0295-00 [I,C*]; C07D0295-10 [I,A]; C07D0311-00 [I,C*]; C07D0311-92 [I,A]; C09B0011-00 [I,C*]; C09B0011-02 [I,A]; C09B0023-00 [I,C*]; C09B0023-00 [I,A]; C09B0023-02 [I,A]; C09B0023-14 [I,A]; C09B0029-00 [I,C*]; C09B0029-00 [I,A]; C09B0043-00 [I,C*]; C09B0043-40 [I,A]; C09B0055-00 [I,C*]; C09B0055-00 [I,A]; C09K0003-00 [I,C*]; C09K0003-00 [I,A]; G02F0001-35 [I,C*]; G02F0001-355 [I,A]; G02F0001-361 [I,A]
	NCL	544/294.000; 359/321.000; 359/326.000; 385/141.000; 526/257.000; 526/258.000; 526/260.000; 526/263.000; 534/789.000; 544/311.000; 546/174.000; 548/184.000; 548/244.000; 560/354.000; 560/358.000; 564/048.000; 564/050.000
EP 621962	IPCI	G02F0001-35 [ICM,5]; C09B0023-00 [ICS,5]
JP 07505963	IPCI	G02F0001-35 [ICM,6]; C07D0239-60 [ICS,6]; C07D0239-00 [ICS,6,C*]; C07D0261-12 [ICS,6]; C07D0261-00 [ICS,6,C*]; C07D0277-54 [ICS,6]; C07D0277-00 [ICS,6,C*]; C07D0295-10 [ICS,6]; C07D0295-00 [ICS,6,C*]; C07D0311-92 [ICS,6]; C07D0311-00 [ICS,6,C*]; C09B0023-00 [ICS,6]; C09B0055-00 [ICS,6]; C09K0003-00 [ICA,6]

OS MARPAT 119:273408

AB Merocyanines with nonlinear optical properties, having structural units of the (thio)barbituric acid, rhodanine, or isoxazolone type and functionality at both ends of the mol. differing in reactivity, can be

incorporated in polymers which are then useful in, e.g., second harmonic generators. Thus, 4-[4-(2-hydroxyethyl)piperazin-1-yl]benzaldehyde was condensed with 3-aminorhodanine in refluxing PhMe-AcOH to give a merocyanine with OH at one end and NH₂ at the other, which was polycond. with Tolonate HDT (a polyisocyanate) to give a crosslinked polymer with second harmonic generating properties after poling, which were stable for 6 days at 100.degree. with no applied elec. field.

ST rhodanine merocyanine difunctional monomer; second harmonic generation polymer

IT Dyes, ***cyanine***
(merocyanines, with functional groups of different reactivity at either end, for polymers with nonlinear optical properties)

IT Urethane polymers, properties
RL: PRP (Properties)
(polyamine-, barbituric acid group-contg., with nonlinear optical properties)

IT Polyesters, properties
RL: PRP (Properties)
(polyamine-, rhodanine-contg., with nonlinear optical properties)

IT Polyamines
RL: USES (Uses)
(polyester-, rhodanine-contg., with nonlinear optical properties)

IT Polyamines
RL: USES (Uses)
(polyurethane-, barbituric acid group-contg., with nonlinear optical properties)

IT Optical nonlinear property
(second-harmonic generation, polymers incorporating merocyanine dyes with)

IT 1076-59-1, 3-Phenyl-5-isoxazolone 1438-16-0, 3-Aminorhodanine
RL: USES (Uses)
(condensation of, with (dimethylamino)cinnamaldehyde)

IT 105-53-3, Diethyl malonate
RL: USES (Uses)
(condensation of, with (hydroxyethyl)(nitrophenyl)urea)

IT 504-17-6
RL: USES (Uses)
(condensation of, with [(hydroxyethyl)piperazino]benzaldehyde)

IT 619-45-4, Methyl p-aminobenzoate 27714-16-5, 1-(2-Hydroxyethyl)-3-phenylbarbituric acid
RL: USES (Uses)
(condensation of, with aminobenzaldehyde deriv.)

IT 3158-63-2, 1,3-Dimethyl-2-thiobarbituric acid
RL: USES (Uses)
(condensation of, with aminocinnamaldehyde deriv.)

IT 54364-57-7
RL: USES (Uses)
(condensation of, with benzaldehyde deriv.)

IT 150846-91-6
RL: USES (Uses)
(condensation of, with mercaptopyrimidinediol)

IT 107-15-3, 1,2-Ethanediamine, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with naphthalic anhydride azo deriv.)

IT ***4485-89-6*** ***6203-18-5***, 4-(Dimethylamino)cinnamaldehyde
RL: USES (Uses)
(condensation of, with phenylisoxazolone)

IT 6492-86-0, 4-Aminonaphthalic anhydride
RL: USES (Uses)
(coupling of diazotized, with ethylphenylethanolamine)

IT 92-50-2, 2-(Ethylphenylamino)ethanol
RL: RCT (Reactant); RACT (Reactant or reagent)
(coupling of, with diazotized aminonaphthalic anhydride)

IT 5405-53-8, 2,7-Dinitrofluorene
RL: RCT (Reactant); RACT (Reactant or reagent)
(partial redn. of)

IT 150847-10-2P
RL: IMF (Industrial manufacture); PREP (Preparation)
(prepn. and condensation with (dimethylamino)cinnamaldehyde)

IT 149789-77-5P, Methyl 3-rhodanineacetate 150846-94-9P 150847-04-4P, 1-(2-Hydroxyethyl)-3-(4-nitrophenyl)barbituric acid
RL: IMF (Industrial manufacture); PREP (Preparation)

(prepn. and condensation with aminobenzaldehyde deriv.)
IT 150847-03-3P, N-(2-Hydroxyethyl)-N'-(4-nitrophenyl)urea
RL: IMF (Industrial manufacture); PREP (Preparation)
(prepn. and condensation with di-Et malonate)

IT 150847-12-4P
RL: IMF (Industrial manufacture); PREP (Preparation)
(prepn. and condensation with ethylenediamine)

IT 150846-80-3P
RL: IMF (Industrial manufacture); PREP (Preparation)
(prepn. and condensation with ethylidenecyclohexylamine deriv.)

IT 120278-89-9P
RL: IMF (Industrial manufacture); PREP (Preparation)
(prepn. and condensation with heterocyclic compds.)

IT 150846-95-0P
RL: IMF (Industrial manufacture); PREP (Preparation)
(prepn. and condensation with rhodanine deriv.)

IT 1214-32-0P, 2-Amino-7-nitrofluorene
RL: IMF (Industrial manufacture); PREP (Preparation)
(prepn. and conversion to isocyanate)

IT 53063-63-1P
RL: IMF (Industrial manufacture); PREP (Preparation)
(prepn. and cyclocondensation with hydroxylamine)

IT 150846-81-4P 150846-90-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn. and deprotection of)

IT 51325-74-7P 78943-22-3P 150846-74-5P 150846-75-6P 150846-76-7P
150846-77-8P 150846-78-9P 150846-79-0P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and nonlinear optical properties of)

IT 63619-28-3P, 4-[Ethyl(2-hydroxyethyl)amino]benzaldehyde 150846-88-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and protection of)

IT 150846-89-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn. and reaction with (diethylphosphono)acetaldehyde)

IT 110441-23-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn. and reaction with (hydroxyethyl)picolinium iodide)

IT 150847-06-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn. and reaction with ethanolamine)

IT 40171-86-6P, 1-(Ethylamino)-2-propanol
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn. and reaction with fluorobenzaldehyde)

IT 150846-97-2P 150846-99-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn. and reaction with isocyanatoethyl ***methacrylate***)

IT 150846-83-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn. and reaction with isoxazolone deriv.)

IT 151481-92-4P 151481-94-6P
RL: IMF (Industrial manufacture); PREP (Preparation)
(prepn. and second harmonic generation response of)

IT 134650-03-6P 145764-87-0P 149544-92-3P 149581-71-5P 149581-72-6P
150846-84-7P 150846-85-8P 150846-86-9P 150846-87-0P 150846-92-7P
150846-96-1P 150846-98-3P 150847-01-1P 150847-02-2P 150847-05-5P
150847-07-7P 150847-08-8P 150847-09-9P 150847-11-3P 150847-13-5P
150847-14-6P 150847-15-7P 150847-16-8P 150847-17-9P 150847-18-0P
150847-19-1P 150847-20-4P 150847-21-5P 150847-22-6P 150847-23-7P
151393-24-7P 151481-95-7P 151481-96-8P
RL: IMF (Industrial manufacture); PREP (Preparation)
(prepn. of)

IT 624-76-0, 2-Iodoethanol
RL: RCT (Reactant); RACT (Reactant or reagent)
(quaternization by, of picoline)

IT 108-89-4, .gamma.-Picoline
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (quaternization of, with iodoethanol)

IT 100-52-7, Benzaldehyde, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with Me acetoacetate anion)

IT 150846-93-8
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with Tolonate HDT)

IT 920-46-7, Methacryloyl chloride
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with [(hydroxyethyl)piperazino]benzaldehyde)

IT 18162-48-6, tert-Butyldimethylsilyl chloride
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with [ethyl(hydroxyethyl)amino]benzaldehyde)

IT 459-57-4, 4-Fluorobenzaldehyde
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with amino alcs.)

IT 118550-50-8, Tolonate HDT
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with amino[[bis(chloroethyl)amino]benzylidene]rhodanine)

IT 27913-86-6, 4-[Bis(2-hydroxyethyl)amino]benzaldehyde 30674-80-7
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with aminorhodanine)

IT 1606-75-3
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with benzaldehyde deriv.)

IT 100-28-7, 4-Nitrophenyl isocyanate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with ethanolamine)

IT 75-56-9, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with ethylamine)

IT 103-76-4, 1-Piperazineethanol 110-73-6, 2-(Ethylamino)ethanol
 13349-82-1
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with fluorobenzaldehyde)

IT 503-38-8, Trichloromethyl chloroformate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with isocyanatonitrofluorene)

IT 141-43-5, Ethanolamine, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with nitrophenyl isocyanate)

IT 75-04-7, Ethylamine, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with propylene oxide)

IT 105-45-3, Methyl acetoacetate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with sodium hydride and butyllithium and benzaldehyde)

L14 ANSWER 16 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1993:659432 CAPLUS <<LOGINID::20061101>>

DN 119:259432

ED Entered STN: 11 Dec 1993

TI Silver halide photographic material containing ***cyanine*** dye
 dissolving out during processing to improve antihalation or filter effect

IN Nakamura, Takeshi; Kaneko, Yutaka

PA Konishiroku Photo Ind, Japan

SO Jpn. Kokai Tokkyo Koho, 19 pp.
 CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03C001-83
 ICS C07D277-34; C07D277-36; C09B023-00

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 41

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 05165146	A2	19930629	JP 1991-330738	19911213
	JP 3074494	B2	20000807		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 05165146	ICM	G03C001-83
	ICS	C07D277-34; C07D277-36; C09B023-00
	IPCI	G03C0001-83 [ICM,5]; C07D0277-34 [ICS,5]; C07D0277-36 [ICS,5]; C07D0277-00 [ICS,5,C*]; C09B0023-00 [ICS,5]

GI

/ Structure 3 in file .gra /

AB Claimed photog. material contains .gtoreq.1 dye I (R, R1, R2, R3 = H or substituent; R and R1, and R2 and R3 may be combined to form rings; R4, R5 = substituent; R4 and R or R1, and R5 and R2 or R3 may form condensed rings; Z = O, S; L, L1, L2 = methyne; m = 0, 1, 2; n = 1, 2). The dye is a colorant for photog. layers to improve antihalation, and/or antiirradn. effect or to modify the spectral sensitivity distribution, and is easily washed out during processing.

ST antihalation thiazolone ***cyanine*** dye photog; filter dye
cyanine photog material

IT Dyes, ***cyanine***
(thiazolone)

IT Photography
(thiazolone ***cyanine*** dye for)

IT 151228-31-8 151228-32-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(coupling reaction of, with ***ethylenic*** compd.)

IT ***1497-49-0*** 17576-35-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(coupling reaction of, with thiazolone compd.)

IT 151228-24-9 151228-25-0 151228-26-1 151228-27-2 151228-28-3
151228-29-4 151228-30-7

RL: USES (Uses)
(photog. dye)

IT 151228-22-7P 151228-23-8P
RL: PREP (Preparation)
(prepn. of, photog. dye)

L14 ANSWER 17 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1992:265688 CAPLUS <<LOGINID::20061101>>

DN 116:265688

ED Entered STN: 27 Jun 1992

TI Heat-developable photosensitive material giving images with improved sharpness

IN Suda, Yoshihiko; Ohayashi, Keiji; Usagawa, Yasushi

PA Konica Co., Japan

SO Jpn. Kokai Tokkyo Koho, 32 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03C008-40

CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 41

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 03135553	A2	19910610	JP 1989-274435	19891020
PRAI	JP 1989-274435		19891020		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 03135553	ICM	G03C008-40
	IPCI	G03C0008-40 [ICM,5]

AB The title material, comprising a support having thereon photosensitive silver halide, a reducing agent and/or a precursor of a reducing agent, and a binder, contains least one dye selected from a group of hepta- and nonamethine ***cyanine*** dyes which have at least two groups having one or more CH2CH2OR (R = H, alkyl) ***radicals*** or are

pyrrolopyridine, thienopyrrole rings, etc., each of the said .
 pyrrolopyridine or thienopyrrole dyes has at least two acidic groups. The
 use of the title material gives images with improved sharpness.
 ST ***cyanine*** dye photosensitive material; heat developable
 photosensitive material; sharpness improved heat developable material; dye
 heat developable photosensitive material
 IT Photothermographic copying
 (dyes in material for, for images with improved sharpness)
 IT Dyes, ***cyanine***
 (pyrrolopyridines and analogs)
 IT 126829-26-3 126854-12-4 131033-84-6 131033-85-7 139390-68-4
 139412-06-9 139412-07-0 139412-08-1 141138-36-5 141631-69-8
 RL: USES (Uses)
 (dye, in heat-developable photosensitive material)
 IT 130293-56-0P 131033-77-7P 131033-79-9P 131033-81-3P 131033-83-5P
 RL: PREP (Preparation)
 (prepn. of, as dye for heat-developable photosensitive material)
 IT ***1120-71-4***, 1,3-Propane sultone 10299-70-4 114166-26-6
 137015-71-5 137015-72-6
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, in prepn. of dye)

L14 ANSWER 18 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1992:59370 CAPLUS <<LOGINID::20061101>>
 DN 116:59370
 ED Entered STN: 21 Feb 1992
 TI Preparation of benz[2,3-d]imidazolium ***cyanine*** dyes
 IN Inagaki, Yoshio
 PA Fuji Photo Film Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese
 IC ICM C07D235-02
 ICS C09B023-00; G02B001-04; G03C001-10; G03C001-72
 CC 28-9 (Heterocyclic Compounds (More Than One Hetero Atom))
 Section cross-reference(s): 74

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 03215474	A2	19910920	JP 1990-4915	19900112
	JP 2579228	B2	19970205		
	US 5227495	A	19930713	US 1991-639442	19910110
PRAI	JP 1990-4915	A	19900112		
	JP 1990-53333	A	19900305		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 03215474	ICM	C07D235-02
	ICS	C09B023-00; G02B001-04; G03C001-10; G03C001-72
	IPCI	C07D0235-02 [ICM,5]; C07D0235-00 [ICM,5,C*]; C09B0023-00 [ICS,5]; G02B0001-04 [ICS,5]; G03C0001-10 [ICS,5]; G03C0001-72 [ICS,5]
US 5227495	IPCI	C07D0235-20 [ICM,5]; C07D0235-00 [ICM,5,C*]; C09B0023-04 [ICS,5]; C09B0023-06 [ICS,5]; C09B0023-08 [ICS,5]; C09B0023-00 [ICS,5,C*]; G03C0001-18 [ICS,5]; G03C0001-14 [ICS,5,C*]
	IPCR	C09B0023-00 [I,C*]; C09B0023-01 [I,A]; C09B0023-02 [I,A]; G03C0001-14 [I,A]; G03C0001-14 [I,C*]
	NCL	548/302.100; 430/170.000; 430/270.200; 430/281.100; 430/343.000; 430/496.000; 430/522.000; 430/914.000; 430/920.000

OS MARPAT 116:59370
 GI

/ Structure 4 in file .gra /

AB The title compds [I; T1, T2 = at. group forming a fused benzene ring; L3 =

1, 3, 5, or 7 methine groups or trivalent linking group comprising a series of methine groups bonded through conjugated double bonds; R1-R4 = (un)substituted C1-12 alkyl or Ph; Y = anion; q = no. required to neutralize the pos. charge; provided that when L3 consists of 1, 3, or 5 methine group, .gtoreq.1 of R1-R4 = (un)substituted C.ltoeq.3 alkyl], useful as photog. sensitizing dyes, recording dyes for optical information recording media, or staining dyes for biol. samples, are prepd. Thus, 0.18 mL Ac2O and 0.27 mL DBU were added to a soln. of 180 mg 1,3-diisobutyl-2-methylbenz[2,3-d]imidazolium 4-methylbenzenesulfonate in DMF, the mixt. was stirred for 2 h at room temp., poured into H2O and filtered to give a solid. The solid was dissolved in MeOH and treated with 1 g Bu4NClO4 to give 210 mg title compd. (II; n = 2). An optical filter (25 .mu. thickness) fabricated by spin-coating a compn. contg. II (n = 1), cellulose triacetate, etc., on a poly(Me ***methacrylate***) support absorbed light at .apprx.500-750 nm and had a smooth surface.

ST benzimidazolium ***cyanine*** dye prepn; optical filter
 cyanine dye

IT Photographic sensitizers
 (benzimidazolium ***cyanine*** dyes)

IT Optical filters
 (benzimidazolium ***cyanine*** dyes for)

IT Dyes, ***cyanine***
 (benzimidazolium derivs., prepn. of)

IT Recording materials
 (optical, benzimidazolium ***cyanine*** dyes)

IT 138501-36-7
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (condensation of, with Et orthoformate)

IT 122-51-0, Ethyl orthoformate ***4485-89-6***
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (condensation of, with benzimidazolium tosylate deriv.)

IT 138501-38-9
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (condensation of, with diazadiphenylpentadiene)

IT 138501-30-1P 138501-32-3P 138501-34-5P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, as ***cyanine*** dye)

L14 ANSWER 19 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1988:169189 CAPLUS <<LOGINID::20061101>>
 DN 108:169189
 ED Entered STN: 13 May 1988
 TI Heptamethine ***cyanine*** dyes for optical recording materials
 IN Higeta, Shigeru; Suzuki, Yoshimi; Shiojima, Isao
 PA Ricoh Co., Ltd., Japan
 SO Jpn. Kokai Tokyo Koho, 6 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C09B023-08
 ICS B41M005-26; C07D209-14
 CC 41-11 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
 Section cross-reference(s): 27, 74

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62232461	A2	19871012	JP 1986-75162	19860401
	US 4847385	A	19890711	US 1987-31374	19870330
PRAI	JP 1986-72073	A	19860328		
	JP 1986-75162	A	19860401		
	JP 1986-125110	A	19860529		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 62232461	ICM	C09B023-08
	ICS	B41M005-26; C07D209-14
	IPCI	C09B0023-08 [ICM,4]; C09B0023-00 [ICM,4,C*]; B41M0005-26 [ICS,4]; C07D0209-14 [ICS,4]; C07D0209-00 [ICS,4,C*]
	IPCR	G11B0007-24 [I,C*]; G11B0007-247 [I,A]
US 4847385	IPCI	C07D0403-06 [ICM,4]; C07D0403-00 [ICM,4,C*]

GI.

/ Structure 5 in file .gra /

AB ***Cyanine*** dyes I (R1 = H, Cl, Br; R2 = H, Ac; X = acid anion; n = 2, 3), which have .lambda.max in the near-IR region and are useful for laser-sensitive optical recording materials, are prepd. Thus, refluxing 4-chlorophenylhydrazines.HCl and 3-methyl-2-butanone in EtOH contg. concd. H2SO4 for 1 h gave 2,3,3-trimethyl-5-chloroindolenine, which was heated with 2-bromobutanol at 100.degree. for 1.5 h to give 1-.beta.-hydroxy-2,3,3-trimethyl-5-chloroindolenium bromide (II). Heating II, 1-anilino-5-phenyliminopenta-1,3-diene and NaOAc in BuOH at 100-110.degree. for 2 h and treating the intermediate with aq. NaOCl gave I (R1 = Cl, R2 = H, X = ClO4, n = 2) (III). A 1% MeOH soln. of III was applied to an ***acrylic*** base material to 450 .ANG. thickness and a signal was recorded by a semiconductor laser (beam diam. 1.54 .mu.m, linear velocity 1.2 m/s, 0.7 MHz). The signal was reproduced by a weak laser beam with signal-noise ratio 54 dB initially and 48 dB after a 40-day storage at 70.degree..

ST ***cyanine*** dye optical recording material; indolenium heptamethine perchlorate ***cyanine*** dye

IT Dyes, ***cyanine***
 (heptamethine, manuf. of, for optical recording materials)

IT Recording materials
 (optical, laser-sensitive, ***cyanine*** dyes for, manuf. of)

IT 108-24-7
 RL: USES (Uses)
 (acetylating agent, in ***cyanine*** dye manuf.)

IT 102643-64-1P 113954-29-3P 113954-31-7P 113954-33-9P 113954-35-1P
 113954-37-3P
 RL: PREP (Preparation)
 (manuf. of, as ***cyanine*** dyes for optical recording materials)

IT 113411-75-9P 113411-77-1P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prepn. and reaction of, with anilino(phenylimino)pentadiene)

IT 25981-83-3P, 2,3,3-Trimethyl-5-chloroindolenine
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prepn. and reaction of, with bromoalkanols)

IT 29636-94-0 113954-27-1
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with anilino(phenylimino)pentadiene)

IT 563-80-4
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with chlorophenylhydrazine hydrochloride)

IT ***1497-49-0***
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with hydroxyalkyl(trimethyl)chloroindolenium salts)

IT 1073-70-7, 4-Chlorophenylhydrazine hydrochloride
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with methylbutanone)

IT 540-51-2, 2-Bromoethanol 627-18-9, 3-Bromo-1-propanol
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with trimethylchloroindoline)

IT 7601-89-0
 RL: USES (Uses)
 (substitution of bromide by, in ***cyanine*** dye manuf.)

L14 ANSWER 20 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1988:133413 CAPLUS <<LOGINID::20061101>>

DN 108:133413

ED Entered STN: 15 Apr 1988

TI Heptamethine ***cyanine*** dyes for optical recording materials

IN Higeta, Shigeru; Suzuki, Yoshimi; Shiojima, Isao

PA Ricoh Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C09B023-08
 ICS B41M005-26; G11B007-24
 CC 41-11 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
 Section cross-reference(s): 27, 74
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62227958	A2	19871006	JP 1986-72073	19860328
	US 4847385	A	19890711	US 1987-31374	19870330
PRAI	JP 1986-72073	A	19860328		
	JP 1986-75162	A	19860401		
	JP 1986-125110	A	19860529		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 62227958	ICM	C09B023-08
	ICS	B41M005-26; G11B007-24
	IPCI	C09B0023-08 [ICM,4]; C09B0023-00 [ICM,4,C*]; B41M0005-26 [ICS,4]; G11B0007-24 [ICS,4]
	IPCR	G11B0007-24 [I,C*]; G11B0007-247 [I,A]
US 4847385	IPCI	C07D0403-06 [ICM,4]; C07D0403-00 [ICM,4,C*]
	IPCR	G11B0007-24 [I,C*]; G11B0007-247 [I,A]
	NCL	548/455.000; 428/167.000; 428/199.000

OS CASREACT 108:133413
 GI

/ Structure 6 in file .gra /

AB ***Cyanine*** dyes I [R1 = H, Cl, Br, NO2; R2 = Me, (CH2)nOR3; R3 = H, Ac; X- = acid anion; n = 2, 3; such that R2 = (CH2)nOR3 when R1 = Cl] show max. absorption in the near-IR region and are useful for laser-sensitive optical recording materials. Thus, heating 1,2,3,3-tetramethyl-5-chloroindolenium perchlorate 29.6, 1-anilino-5-phenyliminopenta-1,3-diene hydrochloride 29.6, and NaOAc 8.2 g and 250 mL Ac2O at 110.degree. for 3 h gave 18.3 g 2-[6-(N-acetylanilino)hexa-1,3,5-trienyl]-1,3,3-trimethyl-5-chloroindolenium perchlorate, 4.6 g of which was heated with 2.7 g 1,2,3,3-tetramethylindolenium perchlorate and 0.82 g NaOAc in 50 mL BuOH at 90-100.degree. for 1.5 h to give 2.7 g I (R1 = H, R2 = Me, X = ClO4) (II), which had .lambda.max (EtOH) 748 nm. A 1% MeOH soln. of II was applied to an ***acrylic*** base material in 450-.ANG. thickness and a signal was recorded by a semiconductor laser (beam diam. 1.5 .mu., linear velocity 1.2 m/s, 0.7 MHz). The signal was reproduced by a weak laser beam with signal/noise ratio 56 decibel initially and 49 decibel after a 40-day storage at 70.degree..

ST ***cyanine*** dye optical recording material; indolenium heptamethine perchlorate ***cyanine*** dye

IT Dyes, ***cyanine***
 (cationic, heptamethine, manuf. of, for optical recording materials)

IT Recording materials
 (optical, laser-sensitive, ***cyanine*** dyes for)

IT 108-24-7
 RL: USES (Uses)
 (acetylating agent, in manuf. of ***cyanine*** dyes)

IT 113411-82-8P 113411-84-0P 113411-86-2P 113411-88-4P 113411-90-8P
 113411-92-0P 113411-94-2P 113614-89-4P

RL: PREP (Preparation)
 (***cyanine*** dyes, manuf. of, for optical recording materials)

IT 113447-38-4P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prepn. and reaction of, with indolenium salts)

IT 13330-41-1 29636-94-0 64944-14-5 113411-75-9 113411-77-1
 113411-79-3 113411-81-7
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with acetoanilino hexatrienylindolenium salts)

IT 31878-25-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with anilino(phenylimino)pentadiene)
IT ***1497-49-0***
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with tetramethylchloroindolenium perchlorate)

L14 ANSWER 21 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1974:76697 CAPLUS <<LOGINID::20061101>>
DN 80:76697
ED Entered STN: 12 May 1984
TI Photoresists
IN Clecak, Nicholas J.; Cox, Robert James
PA International Business Machines Corp.
SO Ger. Offen., 9 pp.
CODEN: GWXXBX
DT Patent
LA German
IC G03F
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic Processes)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2314868	A1	19731004	DE 1973-2314868	19730326
	FR 2177770	A1	19731109	FR 1973-6803	19730220
	FR 2177770	B1	19790119		
	JP 49017223	A2	19740215	JP 1973-23405	19730228
	JP 56017655	B4	19810423		
	US 3887379	A	19750603	US 1973-388706	19730815
PRAI	US 1972-239794	A	19720330		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 2314868	IC	G03F
	IPCI	G03F0007-10
	IPCR	C07D0277-00 [I,C*]; C07D0277-62 [I,A]; C09B0062-44 [I,C*]; C09B0062-78 [I,A]; G03F0007-008 [I,C*]; G03F0007-008 [I,A]
FR 2177770	IPCI	G03C0001-68
	IPCR	C07D0277-00 [I,C*]; C07D0277-62 [I,A]; C09B0062-44 [I,C*]; C09B0062-78 [I,A]; G03F0007-008 [I,C*]; G03F0007-008 [I,A]
JP 49017223	IPCI	G03F0007-10
	IPCR	C09B0062-44 [I,C*]; C09B0062-78 [I,A]; G03F0007-008 [I,A]; G03F0007-008 [I,C*]
US 3887379	IPCI	G03F0007-08; G03C0001-72
	IPCR	C09B0062-44 [I,C*]; C09B0062-78 [I,A]; G03F0007-008 [I,A]; G03F0007-008 [I,C*]
	NCL	430/197.000; 430/194.000; 430/196.000; 430/286.100; 430/926.000; 430/927.000; 522/031.000; 522/110.000; 522/111.000; 522/166.000

AB The adhesion and light-sensitivity of photoresists consisting of a ***photohardenable*** polymer and a film-forming binder can be increased by 0.5-10% of an azo or ***cyanine*** dye contg. an N3 group. Thus, 7-hydroxy-2-naphthylamine-HCl was converted to 7-azidonaphthol by diazotization and reaction with NaN3. Coupling with diazotized p-Me2NC6H4NH2 yielded 7-azido-1-(p-dimethylaminophenylazo)-2-naphthol. A photoresist compn. contained 1.9 g of it with poly(2-chloro-1,3-butadiene) and polyamide 10 g each, stearic acid 900 mg, and phenyl-2-naphthylamine 200 mg in xylene 100 ml.

ST photoresist azide
IT Resists:
(photo-, ***photopolymerizable*** compns. contg. azide-substituted azo or ***cyanine*** dyes for)
IT Ketones, polymers
Polyamides, uses and miscellaneous
RL: USES (Uses)
(***photopolymerizable*** compns. contg. azido-substituted azo or ***cyanine*** dyes and, for photoresist)
IT 100-10-7 122-51-0 3947-76-0 ***6203-18-5***
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction of, with azidodimethylbenzothiazolium iodide)

IT 23085-47-4
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (condensation reactions of)

IT 19262-85-2 25910-39-8
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (coupling reaction of, with azidonaphthol)

IT 51761-17-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (coupling reactions of, with diazonium salts)

IT 51761-16-1
 RL: USES (Uses)
 (diazotization and reaction of, with sodium azide)

IT 57-11-4, uses and miscellaneous 135-88-6
 RL: USES (Uses)
 (***photopolymerizabel*** compns. contg. azido-substituted azo or
 cyanine dyes, polymers, and)

IT 9010-98-4 37300-16-6 51668-42-9
 RL: USES (Uses)
 (***photopolymerizable*** compns. contg. azido-substituted azo or
 cyanine dyes and)

IT 102-71-6, uses and miscellaneous
 RL: USES (Uses)
 (***photopolymerizable*** compns. contg. azido-substituted azo or
 cyanine dyes, polymers, and)

IT 51761-11-6
 RL: USES (Uses)
 (***photopolymerizable*** compns. contg. poly(chlorobutadiene) and,
 for photoresists)

IT 51761-13-8
 RL: USES (Uses)
 (***photopolymerizable*** compns. contg. poly(chlorobutadiene) and,
 for photoresists)

IT 23085-35-0P 23085-37-2P 51761-12-7P 51761-15-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

IT 26628-22-8
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with diazotized hydroxynaphthylamine)

L14 ANSWER 22 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1966:443858 CAPLUS <<LOGINID::20061101>>

DN 65:43858

OREF 65:8187e-f

ED Entered STN: 22 Apr 2001

TI Pariser-Parr-Pople calculation on molecules with amino groups. II. Cyanin,
 merocyanin, and quadrupole merocyanin

AU Klessinger, Martin

CS Univ. Goettingen, Germany.

SO Theoretica Chimica Acta (1966), 5(3), 252-65

CODEN: TCHAAM; ISSN: 0040-5744

DT Journal

LA English

CC 10 (Spectra and Some Other Optical Properties)

AB cf. preceding abstr. The results of P.P.P. calcns. for ***cyanines***
 , merocyanines, and aminoquinones agree well with the exptl. electronic
 and vibrational spectra. The spectrum of 2,5-diaminobenzoquinone-1,4 must
 be considered as a p-benzoquinone spectrum which, under the influence of
 substituents, has undergone a red shift. The charge distribution of this
 diaminoquinone is only slightly different from that of the quinone. These
 results tend to verify the assignment of the ir spectra of the
 aminoquinones as given by Draber and Wallenfels (W. and D., CA 61, 10566b)
 and show that in the case of the aminoquinones the quinone character is so
 strong that it does not appear to be necessary to formulate them as a
 quadrupole merocyanine. 30 refs.

IT Dyes

(***cyanine*** and merocyanine, energy levels, mol. orbitals and
 spectra of)

IT Spectra, visible and ultraviolet

(of aminoquinones, ***cyanines*** and merocyanines, mol. orbitals
 in relation to)

IT Energy levels

Molecular orbitals

(of aminoquinones, ***cyanines*** and merocyanines, spectra and)
 IT Ammonium, [3-(dimethylamino)allylidene]dimethyl
 (ion, energy levels, mol. orbitals and spectrum of)
 IT 108-51-4, p-Benzoquinone ***927-63-9***, Acrolein, 3-(dimethylamino)-
 1128-13-8, p-Benzoquinone, tetraamino- 1521-06-8, p-Benzoquinone,
 2,5-diamino- 2783-57-5, p-Benzoquinone, amino- 4688-60-2,
 2,4-Pentadienal, 5-(dimethylamino)- 13044-90-1, p-Benzoquinone,
 tetrakis(dimethylamino)- 13044-92-3, 2,4,6-Heptatrienal,
 7-(dimethylamino)-
 (energy levels, mol. orbitals and spectrum of)
 IT 14189-79-8, Ammonium, [7-(dimethylamino)-2,4,6-heptatrienyldiene]dimethyl
 38571-89-0, Ammonium, [5-(dimethylamino)-2,4-pentadienyldiene]dimethyl
 (ion, energy levels, mol. orbitals and spectrum of)
 IT 120-12-7, Anthracene
 (***radical*** anion from, electronic spin d. in, calcn. of)

L14 ANSWER 23 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1944:13575 CAPLUS <<LOGINID::20061101>>

DN 38:13575

OREF 38:1965b-e

ED Entered STN: 16 Dec 2001

TI Sensitizing silver halide emulsions containing chromogens

IN Wilmanns, Gustav; Riester, Oskar

PA I. G. Farbenindustrie AG

DT Patent

LA Unavailable

INCL 57B.8.02

CC 5 (Photography)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 714764		19411113	DE	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 714764	INCL	57B.8.02

DE 714764 INCL 57B.8.02

GI For diagram(s), see printed CA Issue.

AB For sensitizing photographic emulsions use is made of trimethinecyanines of the general type where Y is O, S or Se, X is any acid ***radical***, e. g., Cl, Br, I, ClO₄, CH₃SO₄ or C₂H₅SO₄, R₁ is Me, Et, Pr or Bu and R₂ is Me, Et, Pr or Bu. Either the benzothiazole ring or the benzoselenazole ring may be substituted in the 4'-, 5'- or 6'-position by one or more substituents, e. g., alkyls with 1-5 C atoms, alkoxy ***radicals*** or halogens. In the case that Y is O the benzoxazole ring is substituted by a phenyl in the 6'-position.

IT Photography

(hardeners for use in)

IT Photography

(sensitization in, with trimethinecyanines)

IT 95-16-9, Benzothiazole ***273-53-0***, Benzoxazole 273-91-6, Benzoselenazole

(***cyanine*** dyes)

=> d his

(FILE 'HOME' ENTERED AT 07:47:05 ON 01 NOV 2006)

FILE 'CAPLUS' ENTERED AT 07:47:16 ON 01 NOV 2006

L1 0 S US 2004-0019711/PN

L2 2 S US 2004-0131969/PN

L3 1 S US 2004-0204513/PN

FILE 'REGISTRY' ENTERED AT 07:48:16 ON 01 NOV 2006

FILE 'CAPLUS' ENTERED AT 07:48:21 ON 01 NOV 2006

L4 TRA L2 1- RN : 31 TERMS

FILE 'REGISTRY' ENTERED AT 07:48:21 ON 01 NOV 2006

L5 31 SEA L4

FILE 'CAPLUS' ENTERED AT 07:48:26 ON 01 NOV 2006

FILE 'REGISTRY' ENTERED AT 07:48:26 ON 01 NOV 2006
L7 25 SEA L6

FILE 'CAPLUS' ENTERED AT 07:48:35 ON 01 NOV 2006
L8 15716 S L6
L9 17488 S L5 OR L8
L10 957 S L9 AND (PHOTOPOLYMER? OR ACRYLATE OR RADICAL?)
L11 13 S L10 AND (CYANINE OR POLYMETHINE)
L12 476 S L9 AND (CYANINE OR POLYMETHINE)
L13 1369 S L9 AND (PHOTOPOLYMER? OR ACRYLATE OR RADICAL? OR PHOTOINITIAT
L14 23 S L12 AND (PHOTOPOLYMER? OR ACRYLATE OR RADICAL? OR PHOTOINITIA

=> log y

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classification scheme
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multiple databases
NEWS 16 OCT 23 The Derwent World Patents Index suite of databases on STN
has been enhanced and reloaded
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FULL ESTIMATED COST

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FULL ESTIMATED COST

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0.67

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L1 STRUCTURE UPLOADED

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L2 STRUCTURE UPLOADED

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L3 STRUCTURE UPLOADED

=> s l1 full sss

FULL SEARCH INITIATED 09:19:19 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 813 TO ITERATE

100.0% PROCESSED 813 ITERATIONS

2 ANSWERS

SEARCH TIME: 00.00.01

L4 2 SEA SSS FUL L1

=> s l2 full sss
FULL SEARCH INITIATED 09:19:24 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 2418 TO ITERATE

100.0% PROCESSED 2418 ITERATIONS 103 ANSWERS
SEARCH TIME: 00.00.01

L5 103 SEA SSS FUL L2

=> s l3 full sss
FULL SEARCH INITIATED 09:19:28 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 77 TO ITERATE

100.0% PROCESSED 77 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

L6 0 SEA SSS FUL L3

=> s (l4 or l5 or l6) and cyanine
19535 CYANINE
L7 0 (L4 OR L5 OR L6) AND CYANINE

=> s (l4 or l5 or l6) and carbocyanine
1421 CARBOCYANINE
L8 0 (L4 OR L5 OR L6) AND CARBOCYANINE

=> file caplus
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ENTRY SESSION
FULL ESTIMATED COST 510.34 511.01

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=> s (l4 or l5 or l6)
1 L4
46 L5
0 L6
L9 47 (L4 OR L5 OR L6)

=> s l9 and (cyanine or carbocyanine or methine or polymethine)
15330 CYANINE
1359 CYANINES
15728 CYANINE
(CYANINE OR CYANINES)
2023 CARBOCYANINE
520 CARBOCYANINES
2240 CARBOCYANINE
(CARBOCYANINE OR CARBOCYANINES)
6341 METHINE
188 METHINES

6434 METHINE
(METHINE OR METHINES)
2795 POLYMETHINE
247 POLYMETHINES
2857 POLYMETHINE

(POLYMETHINE OR POLYMETHINES)

L10 19 L9 AND (CYANINE OR CARBOCYANINE OR METHINE OR POLYMETHINE)

=> d all 1-19

L10 ANSWER 1 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:562900 CAPLUS <<LOGINID::20061101>>
DN 141:396833
ED Entered STN: 14 Jul 2004
TI Synthesis and absorption spectral properties of bis- ***methine*** dyes
exemplified by 2,5-bis-arylidene-1-dicyanomethylene-cyclopentane
AU Asiri, A. M.
CS Department, Faculty of Science, King Abdul-Aziz University, Jeddah, 21589,
Saudi Arabia
SO Journal of the Chemical Society of Pakistan (2004), 26(1), 57-60
CODEN: JCSPDF; ISSN: 0253-5106
PB Chemical Society of Pakistan
DT Journal
LA English
CC 41-11 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic
Sensitizers)
Section cross-reference(s): 24, 73
OS CASREACT 141:396833
AB A range of ***methine*** dyes has been synthesized by condensation of
the highly electroneg. active methylene compd.
dicyanomethylenecyclopentane with the formyl group of substituted
benzaldehydes. The electronic absorption spectra of the dyes were
investigated. In general, substituents on the arom. aldehyde moiety have
a significant effect on the visible absorption maxima of the dyes;
increasing the solvent polarity also had a pronounced effect on the
absorption maxima.
ST ***cyanine*** dye cyclopentylidenemalononitrile deriv prepn spectra
IT ***Cyanine*** dyes
Solvatochromism
UV and visible spectra
(prepn. and spectra of bis- ***methine*** dyes)
IT ***577995-33-6P*** ***577995-34-7P*** ***577995-35-8P***
577995-36-9P ***577995-37-0P*** ***577995-38-1P***
790696-46-7P
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or
engineered material use); PREP (Preparation); USES (Uses)
(dye; prepn. and spectra of bis- ***methine*** dyes)
IT 19226-99-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(in prepn. bis- ***methine*** dyes)
IT 1087-07-6P 5447-52-9P 42019-83-0P 330567-38-9P 577995-40-5P
790696-44-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(in prepn. bis- ***methine*** dyes)
IT 5660-83-3P, Cyclopentylidenemalononitrile
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(intermediate; prepn. and spectra of bis- ***methine*** dyes)
IT 577995-41-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(orange dye; prepn. and spectra of bis- ***methine*** dyes)
IT 109-77-3, Malononitrile 120-92-3, Cyclopentanone
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material; prepn. and spectra of bis- ***methine*** dyes)
IT 98-03-3P, Thiophene-2-carboxaldehyde 100-10-7P, 4-
(Dimethylamino)benzaldehyde 135-02-4P, 2-Methoxybenzaldehyde
19005-93-7P, Indole-2-carboxaldehyde
RL: SPN (Synthetic preparation); PREP (Preparation)
(starting material; prepn. and spectra of bis- ***methine*** dyes)
IT 577995-42-7P
RL: SPN (Synthetic preparation); PREP (Preparation)

(yellow dye; prepn. and spectra of bis- ***methine*** dyes)

L10 ,ANSWER 2 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:427259 CAPLUS <<LOGINID::20061101>>
DN 139:181532
ED Entered STN: 04 Jun 2003
TI Synthesis and absorption spectral properties of bis- ***methine*** dyes
exemplified by 2,5-bis-arylidene-1-dicyanomethylene-cyclopentanes
AU Asiri, Abdullah Mohamed
CS Chemistry Department, Faculty of Science, King Abdul-Aziz University,
Jeddah, 21589, Saudi Arabia
SO Bulletin of the Korean Chemical Society (2003), 24(4), 426-430
CODEN: BKCSDE; ISSN: 0253-2964
PB Korean Chemical Society
DT Journal
LA English
CC 41-11 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic
Sensitizers)
Section cross-reference(s): 25, 27, 73
OS CASREACT 139:181532
AB A range of ***methine*** dyes has been synthesized by condensation of
the highly electroneg. active methylene compd.
dicyanomethylenecyclopentane (derived from cyclopentanone and
malononitrile) with the formyl group of substituted benzaldehydes. The
electronic absorption spectroscopic properties of the dyes were
investigated. In general, substituents on the arom. aldehyde moiety have
a significant effect on the visible absorption maxima of the dyes;
increasing the solvent polarity also showed a pronounced effect on the
absorption maxima.
ST ***polymethine*** dye dicyanomethylenecyclopentane prepn absorption
spectra solvatochromism
IT ***Cyanine*** dyes
Solvatochromism
UV and visible spectra
(prepn. and spectral properties of bisarylidene(dicyanomethylene)cyclop
entane dyes)
IT 1087-07-6P 5447-52-9P 5660-83-3P, Dicyanomethylenecyclopentane
19226-99-4P 42019-83-0P 53013-59-5P 330567-38-9P 577995-40-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(dye intermediate; prepn. and spectral properties of
bisarylidene(dicyanomethylene)cyclopentane dyes)
IT 100-10-7, 4-(Dimethylamino)benzaldehyde 109-77-3, Malononitrile
120-92-3, Cyclopentanone
RL: RCT (Reactant); RACT (Reactant or reagent)
(dye starting material; prepn. and spectral properties of
bisarylidene(dicyanomethylene)cyclopentane dyes)
IT ***577995-33-6P*** ***577995-34-7P*** ***577995-35-8P***
577995-36-9P ***577995-37-0P*** ***577995-38-1P***
577995-39-2P
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or
engineered material use); PREP (Preparation); USES (Uses)
(dye; prepn. and spectral properties of bisarylidene(dicyanomethylene)c
yclopentane dyes)
IT 577995-41-6P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material
use); PREP (Preparation); USES (Uses)
(orange dye; prepn. and spectral properties of dyes)
IT 93-02-7, 2,5-Dimethoxybenzaldehyde 120-14-9, 3,4-Dimethoxybenzaldehyde
120-57-0, 1,3-Benzodioxole-5-carboxaldehyde 135-02-4,
2-Methoxybenzaldehyde
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. and spectral properties of dyes)
IT 577995-42-7P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material
use); PREP (Preparation); USES (Uses)
(yellow dye; prepn. and spectral properties of dyes)
RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Allen, R; Colour Chemistry 1971
(2) Asiri, A; Dyes and Pigments 1999, V42, P209 CAPLUS
(3) Attia, A; Pharmazie 1998, V37, P551

- (4) Brown, G; Photochromism 1971
- (5) Carsey, T; J Am Chem Soc 1979, V101, P4502 CAPLUS
- (6) Fabian, J; Light Absorption of Organic Colorants 1980
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- (8) Irick, G; J Chem Eng Data 1971, V16, P118 CAPLUS
- (9) Irick, G; Text Chem Color 1969, V1, P178 CAPLUS
- (10) Jager, H; Chem Ber 1962, V95, P242
- (11) Le Guillanton, G; Acad Sci 1972, VC274, P895 CAPLUS
- (12) Loutfy, R; J Phys Chem 1953, V49, P1375
- (13) Prajapati, D; J Chem Soc Perkin Trans 1 1993, P739 CAPLUS
- (14) Wehry, E; Modern Fluorescence Spectroscopy 1976

L10 ANSWER 3 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2000:36383 CAPLUS <<LOGINID::20061101>>

DN 133:75323

ED Entered STN: 17 Jan 2000

TI Systematic study on the optimization of the first hyperpolarizabilities of
methine dyes

AU Ritzel, Christian; Schmaelzlin, Elmar; Braeuchle, Christoph R.; Meerholz,
Klaus; Roessler, Alexander; Ernst, Christian; Wichern, Juergen; Boldt,
Peter

CS Institut fuer Physikalische Chemie, Univ. Muenchen, Munich, Germany

SO Proceedings of SPIE-The International Society for Optical Engineering
(1999), 3796(Organic Nonlinear Optical Materials), 202-208
CODEN: PSISDG; ISSN: 0277-786X

PB SPIE-The International Society for Optical Engineering

DT Journal

LA English

CC 41-11 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic
Sensitizers)

Section cross-reference(s): 73

AB ***Methine*** dyes are frequently used as nonlinear optical (NLO)
chromophores. In the case of our dyes, both the substitution of the
methine proton by a cyano group and the substitution of the
methine carbon by nitrogen lead to a strong bathochromic shift.
In this work the influence of these modifications to the first
hyperpolarizability is systematically investigated.

ST ***methine*** dye NLO hyperpolarizability substituent effect

IT Molecular structure-property relationship
(hyperpolarizability; substituent and structure effects on NLO first
hyperpolarizabilities of ***methine*** dyes)

IT Substituent effects
(on NLO first hyperpolarizabilities of ***methine*** dyes)

IT ***Cyanine*** dyes
(substituent and structure effects on NLO first hyperpolarizabilities
of)

IT Optical hyperpolarizability
(substituent and structure effects on NLO first hyperpolarizabilities
of ***methine*** dyes)

IT 63504-26-7 95640-47-4 109347-61-7 109347-67-3 122533-96-4
124995-13-7 130779-12-3 ***130779-15-6*** 130779-17-8
130779-26-9 130779-27-0 195823-20-2 243991-38-0 263556-44-1
280129-85-3 280129-86-4 280129-87-5 280129-88-6 280129-89-7
280129-90-0 280129-91-1 280129-92-2

RL: PRP (Properties); TEM (Technical or engineered material use); USES
(Uses)

(substituent and structure effects on NLO first hyperpolarizabilities
of ***methine*** dyes)

RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Blanchard-Desce, M; Chem Eur J 1997, V3, P1091 CAPLUS
- (2) Boldt, P; unpublished
- (3) Bosshard, C; Organic Nonlinear Optical Materials 1995
- (4) Kammler, R; J Chem Soc, Faraday Trans 1996, V92, P945 CAPLUS
- (5) Katz, H; J Am Chem Soc 1987, V109, P6561 CAPLUS
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- (7) Levy, Y; Mol Cryst Liq Cryst Sec B: Nonlinear Optics 1993, V4, P1 CAPLUS
- (8) Man, H; Adv Mater 1992, V4, P159 CAPLUS
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- (10) Moylan, C; J Am Chem Soc 1993, V115, P12599 CAPLUS
- (11) Oudar, J; J Chem Phys 1977, V66, P2664 CAPLUS
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Polymers 1991

- (13) Schildkraut, J; Appl Opt 1990, V29, P2839 CAPLUS
- (14) Singer, K; J Opt Soc Am B 1989, V6, P1339 CAPLUS
- (15) Teng, C; Appl Phys Lett 1990, V56, P1734 CAPLUS
- (16) van Walree, C; J Chem Soc, Perkin Trans 2 1997, P799 CAPLUS

L10 ANSWER 4 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1998:76155 CAPLUS <<LOGINID::20061101>>

DN 128:186526

ED Entered STN: 09 Feb 1998

TI Thermal recording material and method providing images with high gradation and stable density

IN Washisu, Shintarou; Usami, Tomomasa

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 25 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM B41M005-26

ICS B41M005-30; G03C001-498

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10029376	A2	19980203	JP 1996-187938	19960717
PRAI	JP 1996-187938		19960717		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 10029376	ICM	B41M005-26
	ICS	B41M005-30; G03C001-498
	IPCI	B41M0005-26 [ICM,6]; B41M0005-30 [ICS,6]; G03C0001-498 [ICS,6]

OS MARPAT 128:186526

GI

/ Structure 1 in file .gra /

AB The IR laser-sensitive recording material has a support and a heat-sensitive layer at least contg. an org. Ag salt, its developer, ***cyanines*** I (Z1, Z2 = atoms required to form N-contg. heterocyclic ring; Z3 = divalent hydrocarbon group required to form 5- or 6-membered ring; R1, R2 = H, alkyl; A = O, S, imino, divalent org. residue; l, m, n = 0, 1; p, q = 0-2) as an IR absorbing dye, and a water-sol. binder. Three methods consisting of the following sequence of exposure steps of the above material are claimed: (1) a step A of thermal imagewise exposure at color forming temps. by IR laser beam modulated corresponding to recording information and a step B of all over exposure below color forming temps. after the imagewise exposure; (2) the step B and the step A; (3) the step B, the step A, and the second step B. The material shows high absorption efficiency to IR laser light and colorless background, the method providing images with high gradation and stable d.

ST thermal recording material org silver salt; laser beam sensitive thermal printing material; ***cyanine*** dye laser beam absorbing

IT Thermal printing

(IR laser-sensitive thermal printing material contg. ***cyanine*** for laser beam-heat conversion)

IT Encapsulation

(in IR laser-sensitive thermal printing material contg. ***cyanine*** for laser beam-heat conversion)

IT ***2256-48-6*** ***2509-86-6*** ***112015-38-0***

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(IR laser-sensitive thermal printing material contg. ***cyanine*** for laser beam-heat conversion)

IT 2489-05-6, Silver behenate

RL: TEM (Technical or engineered material use); USES (Uses)

(IR laser-sensitive thermal printing material contg. ***cyanine*** for laser beam-heat conversion)

IT 99-24-1, Methyl gallate
RL: TEM (Technical or engineered material use); USES (Uses)
(developer; IR laser-sensitive thermal printing material contg.
cyanine for laser beam-heat conversion)
IT 119-39-1, 1(2H)-Phthalazinone
RL: CAT (Catalyst use); USES (Uses)
(developing accelerator; IR laser-sensitive thermal printing material
contg. ***cyanine*** for laser beam-heat conversion)

L10 ANSWER 5 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1994:311441 CAPLUS <<LOGINID::20061101>>
DN 120:311441
ED Entered STN: 11 Jun 1994
TI Durable high-sensitivity electrophotographic photoreceptors
IN Myamoto, Eiichi; Muto, Nariaki; Hanatani, Yasuyuki
PA Mita Industrial Co Ltd, Japan
SO Jpn. Kokai Tokkyo Koho, 28 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03G005-05
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05150472	A2	19930618	JP 1991-316839	19911129
PRAI	JP 1991-316839		19911129		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 05150472	ICM	G03G005-05
	IPCI	G03G0005-05 [ICM,5]

OS MARPAT 120:311441

AB The title electrophotog. photoreceptor contains .gtoreq. 1 types of
claimed ***carbocyanines*** as stabilizer in its photosensitive layer.
The stabilizers serve to prevent deterioration of the photosensitive layer
by light and O3.

ST electrophotog photoreceptor ***carbocyanine*** stabilizer

IT Electrophotographic photoconductors and photoreceptors
(stabilizer for)

IT 22268-66-2 57472-19-2 90429-30-4 96358-42-8 102185-07-9
129120-29-2 155081-15-5 155081-16-6 ***155081-17-7***
155081-19-9

RL: USES (Uses)

(stabilizer, electrophotog. photoreceptor contg.)

L10 ANSWER 6 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1994:19304 CAPLUS <<LOGINID::20061101>>
DN 120:19304
ED Entered STN: 08 Jan 1994
TI Infrared-heating-type thermal-transfer recording sheet containing
methine derivative absorber
IN Murata, Jukichi; Kawana, Makoto; Urano, Toshoshi; Maeda, Shuichi
PA Mitsubishi Chemical Industries Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM B41M005-30

ICS B41M005-26

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

Section cross-reference(s): 25

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05162461	A2	19930629	JP 1991-327832	19911211
PRAI	JP 1991-327832		19911211		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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JP 05162461 ICM B41M005-30
ICS B41M005-26
IPCI B41M0005-30 [ICM,5]; B41M0005-26 [ICS,5]
OS MARPAT 120:19304
GI

/ Structure 2 in file .gra /

AB The sheet, where recording is done by heating with IR ray, comprise a base film coated with a heat-sensitive layer contg. a heat-transferable dye and ***methine*** deriv. I as an IR absorber [R1-2 = H, halo, OH, alkyl, alkoxy, alkoxycarbonyl; R3 = (un)substituted arom. or heterocyclic amine-contg. arom. residue]. The sheet shows good transferability and gives clear high-d. images.
ST thermal transfer sheet ***methine*** absorber; ***methine*** IR absorber transfer recording
IT Printing, nonimpact
(thermal-transfer, sheets, contg. ***methine*** IR absorbers, with good transferability)
IT ***130779-13-4*** ***151587-16-5*** ***151587-17-6***
151587-18-7 ***151587-19-8***
RL: USES (Uses)
(IR absorber, thermal-transfer recording sheet contg., with good transferability)

L10 ANSWER 7 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1993:682298 CAPLUS <<LOGINID::20061101>>
DN 119:282298
ED Entered STN: 25 Dec 1993
TI Infrared laser thermal recording materials using ***cyanine*** dye
IN Hosoi, Noryuki; Inagaki, Yoshio
PA Fuji Photo Film Co Ltd, Japan
SO Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM B41M005-26
ICS B41M005-28
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1
PATENT NO. KIND DATE APPLICATION NO. DATE

PI JP 05124339 A2 19930521 JP 1991-313465 19911101
PRAI JP 1991-313465 19911101

CLASS
PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

JP 05124339 ICM B41M005-26
ICS B41M005-28
IPCI B41M0005-26 [ICM,5]; B41M0005-28 [ICS,5]

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The title materials comprises a support with a coating of a heat-sensitive layer contg. a colorless coloring component (A), another component (B) which reacts with A to form a color, in which .gtoreq.1 of A and B is microencapsulated, and an IR-absorbing dye I [R1-2= H, alkyl; Z1-2 = atoms required to form a N-contg. heterocycle; Z3 = divalent hydrocarbon required to form a 5- or 6-membered ring; Z4 = O, S, imino, divalent org. group; l, m, n = 0, 1; p, q = 0-2]. The materials show good thermal sensitivity and provide high quality images without fog by using low power IR laser. Thus, a PET film was coated with a compn. contg. Crystal Violet lactone-contg. microcapsules, II, p-HOC6H4CO2CH2Ph, p-

HOC6H4CH(CH₃EtBu)C6H4OH-p, and III, and with a protective layer to give a thermal recording sheet.

ST thermal recording material IR laser; IR absorbing ***cyanine*** dye recording; coloring component microcapsule thermal recording

IT Thermographic copying
(IR-sensitive, materials for, contg. IR-absorbing agent)

IT Printing, nonimpact
(thermal, IR-sensitive, materials for, contg. IR-absorbing agent)

IT ***2256-48-6*** ***112015-38-0*** 151359-11-4
RL: USES (Uses)
(IR-absorbing dye, IR-sensitive thermal recording material contg.)

IT 94-18-8 53721-15-6 74462-02-5
RL: USES (Uses)
(color-developer, IR-sensitive thermal recording material using)

IT 92-77-3 107097-59-6
RL: USES (Uses)
(coupler, IR-sensitive thermal recording material using, diazo compd. and)

IT 68015-88-3
RL: USES (Uses)
(microencapsulated, IR-sensitive thermal recording material using, coupler and)

IT 1552-42-7, Crystal Violet lactone 92601-66-6
RL: USES (Uses)
(microencapsulated, color-former, IR-sensitive thermal recording material using)

L10 ANSWER 8 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1992:436523 CAPLUS <<LOGINID::20061101>>

DN 117:36523

ED Entered STN: 26 Jul 1992

TI Electrophotographic photoreceptor

IN Miyazaki, Hajime; Go, Shintetsu; Miyaji, Toshie; Kashizaki, Yoshiro

PA Canon K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03G005-06
ICS G03G005-06

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 03196046	A2	19910827	JP 1989-335146	19891226
	JP 2641072	B2	19970813		
PRAI	JP 1989-335146		19891226		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 03196046	ICM	G03G005-06
	ICS	G03G005-06
	IPCI	G03G0005-06 [ICM,5]; G03G0005-06 [ICS,5]

GI

/ Structure 3 in file .gra /

AB An electrophotog. photoreceptor has on an elec. conductive support a photoconductive layer contg. at least one ***methine*** dye [I; Ar₁, Ar₂ = tert-amino-contg. arom. hydrocarbonyl, .gtoreq.3 benzene ring-fused polycyclic hydrocarbonyl; X = O, S, C(CN)₂; Y = fused or bivalent arom. hydrocarbon group; n = 0-2]. The electrophotog. photoreceptor has improved carrier generation and/or transporting efficiency and shows high sensitivity, excellent durability, and excellent potential stability during long-term use.

ST electrophotog photoreceptor ***methine*** dye; charge generating agent
methine dye

IT Electrophotographic photoconductors and photoreceptors
(with charge-generating layers contg. ***methine*** dyes)

IT 142050-52-0 ***142050-53-1*** 142050-54-2 ***142050-55-3***
142050-56-4 ***142050-57-5*** ***142050-58-6***
142050-59-7 ***142050-60-0*** ***142050-61-1***
RL: USES (Uses)
(electrophotog. photoreceptor with charge-generating layer contg.)

L10 ANSWER 9 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1992:173959 CAPLUS <<LOGINID::20061101>>
DN 116:173959
ED Entered STN: 03 May 1992
TI Synthesis of ***methine*** dyes having dimethylaminoindolizine
skeleton as an electron donor
AU Matsuda, Yoshiro; Katou, Keisuke; Matsumoto, Hiroshi; Yamashita, Makoto;
Ide, Shizuki; Takahashi, Kimitoshi; Torisu, Katsura; Furuno, Kazuki;
Maeda, Syuichi
CS Sch. Pharm. Sci., Nagasaki Univ., Nagasaki, 852, Japan
SO Yakugaku Zasshi (1992), 112(1), 42-9
CODEN: YKKZAJ; ISSN: 0031-6903
DT Journal
LA English
CC 27-11 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 22, 41
GI

/ Structure 4 in file .gra /

AB Reacting 2-(1-cyano-1-methylthio)methyleneindan-1,3-dione with
(dimethylamino)indolizine derivs. I (R = CO₂Et, X = H; R = H, X = cyano,
CO₂Et) gave substituted [(methylthio)indoliziny]methyleneindandiones II
(Y = Z = O) (III) and IV (X = cyano, CO₂Et, Y = Z = O) (V), resp. II [Y =
O, Z = C(CN)₂; Y = Z = C(CN)₂] and IV [X = cyano, CO₂Et, Y = O, Z =
C(CN)₂; X = cyano, CO₂Et, Y = Z = C(CN)₂] were synthesized by the
condensation of III and V with CH₂(CN)₂ in the presence of TiCl₄ in
pyridine.
ST ***methine*** dye prepn visible spectrometry;
indolizinylmethyleneindan prepn visible spectrometry
IT Dyes, ***cyanine***
(cyanoindolizinylmethyleneindanones, prepn. of)
IT Ultraviolet and visible spectrometry
(of ***methine*** dyes)
IT 70760-97-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with (dimethylamino)indolizines)
IT 109-77-3, Malononitrile
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with (indolizinylmethylene)indandione derivs.)
IT 13623-94-4 58092-40-3 130082-57-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with [(ethoxycarbonyl)methyl]pyridinium bromide)
IT 140384-48-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with di(methylthio)ethenes)
IT 38172-19-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with formyl(methylthio)indolizines)
IT 140230-96-2P 140230-97-3P 140230-98-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and condensation of, with bis(dicyanomethylene)indan)
IT 140230-99-5P 140231-00-1P 140231-01-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and condensation of, with malononitrile)
IT 140230-91-7P 140230-92-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn. and decarboxylation of)
IT 140230-89-3P 140230-90-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn. and intramol. cyclocondensation of)
IT 140231-02-3P 140231-03-4P 140231-04-5P ***140231-05-6P***

140231-10-3P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and visible spectroscopy of)

IT 140230-93-9P 140230-94-0P 140230-95-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn., formylation, and condensation of, with
(cyanomethylthio)methyleneindandione)

L10 ANSWER 10 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1991:33188 CAPLUS <<LOGINID::20061101>>

DN 114:33188

ED Entered STN: 26 Jan 1991

TI ***Methine*** compounds for laser-sensitive optical recording medium

IN Matsuda, Yoshiro; Kato, Keisuke; Maeda, Shuichi

PA Mitsubishi Kasei Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C09B023-00

ICS B41M005-26; C09B023-12; C09B023-14; G11B007-24

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

Section cross-reference(s): 41

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 02194060	A2	19900731	JP 1989-13237	19890124
	JP 2731930	B2	19980325		
PRAI	JP 1989-13237		19890124		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 02194060	ICM	C09B023-00
	ICS	B41M005-26; C09B023-12; C09B023-14; G11B007-24
	IPCI	C09B0023-00 [ICM,5]; B41M0005-26 [ICS,5]; C09B0023-12 [ICS,5]; C09B0023-14 [ICS,5]; G11B0007-24 [ICS,5]

GI

/ Structure 5 in file .gra /

AB The title compds. I [R1-2 = H, halo, OH, alkyl, alkoxy, cyano, NO2, alkoxy carbonyl(oxy), aryloxy carbonyl(oxy), (di)alkylaminocarbonyl, alkylcarbonyloxy, arylcarbonyloxy; K = (un)substituted arom. or heterocyclic amine residue] are used as dyes in the recording layers of laser-sensitive optical recording medium. The medium makes use of heat-mode changes of dyes by laser beam irradiation for recording, and detection of the changes for signal reproduction. I show good solubility in organic solvents, are coatable, and show good contrast. Thus, reaction of dioxindan II with PhNET2 and subsequent treatment with CH2(CN)2 gave I (R1-2 = H, K = C6H4NET2-4) (III). A poly(Me methacrylate) plate was then spin coated with a solution of III and nitrocellulose in MEK, dried at 60.degree. for 10 min, and recorded upon by using a 830-nm semiconductor laser of 6 mW to obtain a recording with good sensitivity and light resistance.

ST laser sensitive optical recording dye; ***methine*** dye optical recording medium; indan dicyanomethylene dye optical recording

IT Dyes, ***cyanine***
(tris(cyanomethylene)indans, for laser-sensitive optical recording medium)

IT Recording materials
(optical, dyes for, tris(cyanomethylene)indans as)

IT 50307-64-7P 130779-10-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)

(prepn. and reaction of, in manuf. of ***methine*** dyes)

IT ***130779-13-4P*** ***130779-14-5P*** ***130779-15-6P***
131289-59-3P ***131289-60-6P*** ***131289-61-7P***

131289-62-8P ***131289-63-9P*** ***131289-64-0P***
 RL: PREP (Preparation)
 (prepn. of, dyes, for laser-sensitive optical recording medium)
 IT 91-66-7, N,N-Diethylaniline 109-77-3, Malononitrile 70760-97-3
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, in prepn. of ***methine*** dyes)
 L10 ANSWER 11 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1990:633312 CAPLUS <<LOGINID::20061101>>
 DN 113:233312
 ED Entered STN: 22 Dec 1990
 TI Novel synthesis of ***methine*** dyes absorbing in the near-infrared region
 AU Matsuda, Yoshiro; Gotou, Hiromi; Katou, Keisuke; Matsumoto, Hiroshi; Yamashita, Makoto; Maeda, Syuichi
 CS Fac. Pharm. Sci., Nagasaki Univ., Nagasaki, 852, Japan
 SO Dyes and Pigments (1990), 14(3), 225-38
 CODEN: DYPIDX; ISSN: 0143-7208
 DT Journal
 LA English
 CC 41-6 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
 OS CASREACT 113:233312
 GI

/ Structure 6 in file .gra /

AB By reaction of 2-[1-cyano-1-(methylthio)methylene]-1,3-indandione with nucleophiles, the corresponding substituted compds. were obtained as typical donor-acceptor chromogens. Novel ***methine*** dyes absorbing in the near-IR region (650-850 nm) were synthesized by condensation of I (R1 = Et, Bu; R2 = H, Me) with 1 or 2 mol CH2(CN)2 in the presence of TiCl4 and pyridine.
 ST ***methine*** dye near IR absorbing; indandione ***methine*** dye near IR
 IT Dyes, ***cyanine***
 (near-IR-absorbing, indandione derivs., prepn. of)
 IT 109-77-3, Malononitrile
 RL: USES (Uses)
 (condensation of, with indandione derivs.)
 IT 65472-87-9
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (cyanation of)
 IT 50307-64-7P 107881-86-7P 112208-78-3P 130779-26-9P 130779-27-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and condensation with malononitrile)
 IT 70760-97-3P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prepn. and reaction of, with nucleophiles)
 IT 130779-10-1P 130779-11-2P 130779-12-3P ***130779-13-4P***
 130779-14-5P ***130779-15-6P*** 130779-16-7P 130779-17-8P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and visible and near-IR absorption spectra of)
 IT 24789-99-9P 130779-18-9P 130779-19-0P 130779-20-3P 130779-21-4P
 130779-22-5P 130779-23-6P 130779-24-7P 130779-25-8P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)
 IT 143-33-9, Sodium cyanide
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with bis(methylthio)methyleneindandione)
 IT 91-66-7 613-29-6, N,N-Dibutylaniline
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with cyano(methylthio)methylenedihydrooxobenzothiophene dioxide)
 IT 96-54-8, 1-Methylpyrrole 275-51-4, Azulene 5185-39-7 27086-49-3
 28356-09-4 32863-56-2, 1-Butyl-4-methylquinolinium iodide 53687-92-6
 55602-28-3
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with cyano(methylthio)methylenedindandione)

L10 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1990:506519 CAPLUS <<LOGINID::20061101>>
 DN 113:106519
 ED Entered STN: 16 Sep 1990
 TI Optical information recording materials
 IN Inagaki, Yoshio; Yabe, Masao; Adachi, Keiichi
 PA Fuji Photo Film Co., Ltd., Japan
 SO Ger. Offen., 34 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 IC ICM G11B007-24
 ICS C09B023-02; C09B023-10
 ICA C09D007-12; C09D129-04; C09D139-06; C09D129-14; C09D169-00; C09D101-18;
 C09D129-10; C09D135-00; C09D125-10; C09D191-00
 CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 28, 41

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3928758	A1	19900301	DE 1989-3928758	19890830
	JP 02062281	A2	19900302	JP 1988-215708	19880830
	JP 02089684	A2	19900329	JP 1988-243037	19880928
PRAI	JP 1988-215708	A	19880830		
	JP 1988-243037	A	19880928		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 3928758	ICM	G11B007-24
	ICS	C09B023-02; C09B023-10
	ICA	C09D007-12; C09D129-04; C09D139-06; C09D129-14; C09D169-00; C09D101-18; C09D129-10; C09D135-00; C09D125-10; C09D191-00
	IPCI	G11B0007-24 [ICM,5]; C09B0023-02 [ICS,5]; C09B0023-10 [ICS,5]; C09B0023-00 [ICS,5,C*]; C09D0007-12 [ICA,5]; C09D0129-04 [ICA,5]; C09D0139-06 [ICA,5]; C09D0139-00 [ICA,5,C*]; C09D0129-14 [ICA,5]; C09D0169-00 [ICA,5]; C09D0101-18 [ICA,5]; C09D0101-00 [ICA,5,C*]; C09D0129-10 [ICA,5]; C09D0129-00 [ICA,5,C*]; C09D0135-00 [ICA,5]; C09D0125-10 [ICA,5]; C09D0125-00 [ICA,5,C*]; C09D0191-00 [ICA,5]
	IPCR	C09B0023-00 [I,C*]; C09B0023-01 [I,A]; C09B0023-02 [I,A]; C09B0023-10 [I,A]; G11B0007-24 [I,C*]; G11B0007-244 [I,A]; G11B0007-247 [I,A]; G11B0007-249 [I,A]
JP 02062281	IPCI	B41M0005-26 [ICM,5]; C09K0009-02 [ICS,5]; G11B0007-24 [ICS,5]
JP 02089684	IPCI	B41M0005-26 [ICM,5]; G11B0007-24 [ICS,5]

OS MARPAT 113:106519

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB An optical recording material for the writing, reading, and erasing of information by using a laser beam uses a recording layer contg. a .gtoreq.1 dye of the structure I (R1-R3 = alkyl, aryl, or alkenyl, and .gtoreq.1 of R1-R3 can bond with L to form a ring; Z1-Z2 = alkyl, aryl, alkenyl, or together can form a ring; L - a trivalent group; G = the necessary atoms to form a 5- or 6-membered ring; Q = N or substituted C; X- = anion) and .gtoreq.1 dye of the structure II (R7 = H, halogen, alkyl, alkoxy, aryl, or a benzene ring; R8-R9 = H, alkyl, or aryl; Z3 = a chain with a terminal N or O) or III (Z4-Z5 = the necessary atoms for forming a heterocyclic ring; R12-R13 = H or aryl; A = O, S, imino, or a bivalent org. group; p1, p2, or p3 = 0 or 1; q1, q2 = 0, 1, or 2). Thus, a polycarbonate plate was coated with a soln. contg. IV and V in 2,2,3,3-tetrafluoropropanol to give a recording medium with a high reflectivity and a high carrier-to-noise ratio.

ST laser optical recording material dye
IT Dyes, ***cyanine***
(for optical recording materials)
IT Recording materials
(optical, laser-sensitive, contg. dyes)
IT ***2509-86-6*** 122274-46-8 127554-59-0 127809-77-2 127809-79-4
128851-03-6 128851-05-8
RL: TEM (Technical or engineered material use); USES (Uses)
(optical recording materials contg., laser-sensitive)
IT 32248-28-5P
RL: PREP (Preparation)
(prepn. and laser-sensitive optical recording material contg.)
IT 122274-47-9P
RL: PREP (Preparation)
(prepn. of, for laser-sensitive optical recording material)
IT 821-42-1, 2-Pentenedial 6028-82-6 17576-35-1, 1,3,3-Trimethoxypropene
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in prepn. of dyes for laser-sensitive optical recording
materials)

L10 ANSWER 13 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1984:481726 CAPLUS <<LOGINID::20061101>>
DN 101:81726
ED Entered STN: 01 Sep 1984
TI Optical recording materials
PA Canon K. K., Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC B41M005-26; G03C001-72; G11B007-24; G11C013-04; G11C017-00
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

FAN.CNT 9

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 58220792	A2	19831222	JP 1982-103603	19820616
	JP 01025714	B4	19890518		
	US 5079127	A	19920107	US 1990-512587	19900424
	US 5079128	A	19920107	US 1990-512588	19900424
	US 5246814	A	19930921	US 1991-769636	19911001
	US 5278026	A	19940111	US 1991-769397	19911001
	US 5320930	A	19940614	US 1993-86113	19930706
	US 5382497	A	19950117	US 1994-221904	19940401
PRAI	JP 1982-56963	A	19820406		
	JP 1982-64926	A	19820419		
	JP 1982-64927	A	19820419		
	JP 1982-64928	A	19820419		
	JP 1982-102579	A	19820614		
	JP 1982-102580	A	19820614		
	JP 1982-103603	A	19820616		
	JP 1982-103604	A	19820616		
	JP 1982-123144	A	19820715		
	US 1983-481741	B1	19830404		
	US 1985-756570	B1	19850718		
	US 1987-53563	B1	19870521		
	US 1989-378491	B1	19890711		
	US 1990-512587	A3	19900424		
	US 1990-512588	A3	19900424		
	US 1991-769636	A3	19911001		
	US 1993-86113	A3	19930706		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 58220792	IC	B41M005-26; G03C001-72; G11B007-24; G11C013-04; G11C017-00
	IPCI	B41M0005-26; G03C0001-72; G11B0007-24; G11C0013-04; G11C0017-00
	IPCR	G11B0007-24 [I,C*]; G11B0007-247 [I,A]
US 5079127	IPCI	G03C0005-00
	NCL	430/269.000; 235/488.000; 346/135.100; 346/137.000; 428/156.000; 428/204.000; 428/207.000; 430/270.180;

430/552.000; 430/594.000; 430/616.000

US 5079128 IPCI G03C0005-00 [ICM,5]
 IPCR G03G0005-06 [I,A]; G03G0005-06 [I,C*]; G11B0007-24 [I,C*]; G11B0007-244 [I,A]; G11B0007-247 [I,A]; G11B0007-249 [I,A]
 NCL 430/269.000; 235/488.000; 346/135.100; 346/137.000; 428/156.000; 428/204.000; 428/207.000; 430/270.180; 430/557.000; 430/594.000; 430/945.000; 430/964.000

US 5246814 IPCI G03C0005-00
 IPCR G03G0005-06 [I,A]; G03G0005-06 [I,C*]; G11B0007-24 [I,C*]; G11B0007-244 [I,A]; G11B0007-247 [I,A]; G11B0007-249 [I,A]
 NCL 430/269.000; 235/488.000; 346/135.100; 346/137.000; 430/270.180; 430/270.200; 430/552.000; 430/594.000; 430/616.000

US 5278026 IPCI G03C0005-00 [ICM,5]
 IPCR G03G0005-06 [I,A]; G03G0005-06 [I,C*]; G11B0007-24 [I,C*]; G11B0007-244 [I,A]; G11B0007-247 [I,A]; G11B0007-249 [I,A]
 NCL 430/269.000; 346/135.100; 346/137.000; 428/156.000; 428/204.000; 428/207.000; 430/270.180; 430/270.200; 430/557.000; 430/594.000; 430/945.000

US 5320930 IPCI G03C0005-00 [ICM,5]
 IPCR G03G0005-06 [I,A]; G03G0005-06 [I,C*]; G11B0007-24 [I,C*]; G11B0007-244 [I,A]; G11B0007-247 [I,A]; G11B0007-249 [I,A]
 NCL 430/269.000; 235/488.000; 346/135.100; 346/137.000; 428/156.000; 428/204.000; 428/207.000; 430/270.180; 430/270.200; 430/275.100; 430/552.000; 430/594.000; 430/616.000
 ECLA G03G005/06B4B; G03G005/06D4D; G03G005/06H2D2; G11B007/244; G11B007/247; G11B007/249

US 5382497 IPCI G03C0005-00 [ICM,6]
 IPCR G11B0007-24 [I,C*]; G11B0007-244 [I,A]; G11B0007-247 [I,A]
 NCL 430/269.000; 235/488.000; 346/135.100; 346/137.000; 430/270.180; 430/270.200; 430/552.000; 430/594.000; 430/616.000
 ECLA G11B007/244; G11B007/247

GI For diagram(s), see printed CA Issue.

AB Optical recording materials have an org. layer contg. a compd. having the general formula I (A = N-contg. heterocycle that may be substituted; Z = divalent hydrocarbon group to form a 5-6-membered ring; R, R1 = H, alkyl; Z1 = O, S, imido, org. group that may be substituted; m, n, r = 0, 1; p, q = 0, 1, 2). The org. layer has light absorption in the region >780 nm, and enables recording by a semiconductor laser light of wavelength near 830 nm. Thus, a mixt. of II 3, a PhNO2 lacquer (25% in EtCOME, OH-less lacquer from Daicel Chem. Ind.) 12, and EtCOME 70 wt. parts was coated on an Al-laminated glass plate to give a material which was used for recording with a 5 mW, 8 MHz Ga/Al/As laser collimated to a 1 .mu. spot.

ST ***cyanine*** dye laser recording material

IT Recording materials
 (optical, photosensitive compns. contg. ***cyanine*** dye for)

IT 98-95-3, uses and miscellaneous
 RL: USES (Uses)
 (lacquer contg., photosensitive compns. contg. ***cyanine*** dye and, for laser recording)

IT ***2509-86-6*** ***90936-88-2*** 90936-89-3 90955-58-1
 90955-59-2
 RL: USES (Uses)
 (photosensitive compns. contg., for laser recording)

L10 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1981:415973 CAPLUS <<LOGINID::20061101>>

DN 95:15973

ED Entered STN: 12 May 1984

TI Organic electrophotosensitive materials for migration imaging processes

IN Webster, Frank G.; Regan, Michael T.

PA Eastman Kodak Co., USA

SO U.S., 28 pp. Cont.-in-part of U.S. Ser. No. 818,695, abandoned.
 CODEN: USXXAM

DT Patent

LA English
 IC G03G013-24
 INCL 430041000
 CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic Processes)
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4256819	A	19810317	US 1978-928675	19780728
	FR 2399052	A1	19790223	FR 1978-21823	19780724
	FR 2399052	B1	19800404		
	JP 54024025	A2	19790223	JP 1978-90075	19780725
	GB 2002914	A	19790228	GB 1978-31058	19780725
	GB 2002914	B2	19820217		
PRAI	US 1977-818695	A2	19770725		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 4256819	IC	G03G013-24
	INCL	430041000
	IPCI	G03G0013-24; G03G0013-00 [C*]
	IPCR	G03G0017-00 [I,C*]; G03G0017-04 [I,A]
	NCL	430/041.000; 430/076.000; 430/078.000; 430/079.000; 430/083.000; 544/300.000; 548/120.000
FR 2399052	IPCI	G03G0017-04; G03G0017-00 [C*]
	IPCR	G03G0017-00 [I,C*]; G03G0017-04 [I,A]
JP 54024025	IPCI	G03G0017-04; G03G0017-00 [C*]
	IPCR	G03G0017-00 [I,C*]; G03G0017-04 [I,A]
GB 2002914	IPCI	G03G0017-04; G03G0017-00 [C*]; C09B0021-00
	IPCR	G03G0017-00 [I,C*]; G03G0017-04 [I,A]

GI

/ Structure 7 in file .gra /

AB Electrophotosensitive compds. useful in electrophoretic imaging process comprise I (Z, Z1 = atoms to complete a basic type heterocyclic ring; Z2 = N or a ***methine*** group CG1; G, G1 = H, aryl, alkyl, or taken together complete a mononuclear or fused polynuclear carbocyclic ring; A,A1 = alkyl, aryl, carboxy, alkoxy, carbonyl, CN, NO2, or together form a heterocyclic ring; R,R1 = H, alkyl, aralkyl, aryl; R2,R3 = H, alkyl, aryl, CN, or taken together with the atoms to which they are attached represent a C5-6 carbocyclic ring; m,n = 0,1; p,q,r = 0,1,2). Thus, 5g of the soln. contg. Isopar G 2.2, Solvesso 1.3, Piccotex 100 1.4, PVT (poly(vinyltoluene-lauryl methacrylate-Li methacrylate-methacrylic acid) (56/40/3.6/0.4)) 0.1g was combined with II 0.45 g (milled 3 h on a paint shaker), and tested in an electrophoretic imaging app. (voltage between electrodes 2 kV and 1000 W Xe lamp exposure) to give an excellent quality neg. image reprodn. of the original on one electrode.

ST electrophoretic imaging electrophotosensitive compd; org photoconductor
 electrophoretic image formation

IT Photography, electro-
 (electrophoretic, org. electrophotosensitive compds. for)

IT	***2256-48-6***	2509-88-8	2573-44-6	2573-45-7	2573-46-8
13320-92-8	18249-01-9	24054-44-2	28279-27-8	54849-72-8	
56387-34-9	65159-60-6	65159-61-7	65159-65-1	65159-66-2	
65159-68-4	65159-69-5	65159-71-9	65159-72-0	65159-73-1	
65159-74-2	65159-75-3	65159-77-5	65159-78-6	65159-79-7	
65159-80-0	65159-81-1	65159-82-2	***65159-83-3***	65159-85-5	
65181-56-8	65181-57-9	65181-58-0	65206-45-3	65206-46-4	
70516-34-6	70516-71-1	70516-72-2	70516-73-3	70516-74-4	
70516-75-5	70516-76-6	70516-77-7	70516-79-9	70516-80-2	
70516-81-3	70516-82-4	70516-83-5	70516-84-6	70516-85-7	
70516-86-8	70516-87-9	70516-88-0	70516-89-1	70516-90-4	
70516-91-5	70516-92-6	70516-93-7	70545-32-3	***70545-33-4***	
78021-12-2	78021-13-3	78021-14-4	78021-15-5	78021-16-6	
78021-17-7	78021-18-8	78021-19-9	78021-20-2	78021-21-3	
78021-22-4	78021-23-5	78021-24-6	78021-25-7	78021-26-8	
78021-27-9	78021-28-0	78021-29-1	78021-30-4	78021-31-5	
78021-32-6	78021-33-7	78021-34-8	78021-35-9		

RL: USES (Uses)

(photoconductor, for electrophoretic migration imaging process)

L10 ANSWER 15 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1978:43705 CAPLUS <<LOGINID::20061101>>
 DN 88:43705
 ED Entered STN: 12 May 1984
 TI Electrophotosensitive materials for migration imaging processes
 AU Webster, Frank Glen; Regan, Michael Thomas
 CS UK
 SO Research Disclosure (1977), 163, 33-8 (No. 16324)
 CODEN: RSDSBB; ISSN: 0374-4353
 DT Journal; Patent
 LA English
 CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic Processes)
 PATENT NO. KIND DATE APPLICATION NO. DATE

 PI RD 163024 19771110
 PRAI RD 1977-163024 19771110
 GI

/ Structure 8 in file .gra /

AB Thirty six heterocyclic compds. contg. ***methine*** linkages are described for use as electrophotosensitive pigments for migration imaging. Thus, I 0.045 g and a 5g aliquot of a soln. contg. Isopar G 2.2, Solvesso 1.3, Piccotex 100 1.4, and poly(lauryl methacrylate-Li methacrylate-methacrylic acid-vinyltoluene) (40:3.6:0.4:56) 0.1 g were combined with stainless steel balls 12g and milled for 3 hr on a paint shaker. The material was then tested and obsd. to be electrophotosensitive as evidenced by obtaining a neg. appearing image of an original on 1 electrode and a complementary image on the other.
 ST electrophotosensitive pigment electrophotog migration imaging
 IT Photography, electro-
 (migration imaging in, electrophotosensitive heterocyclic
 methine compds. for)
 IT ***2256-48-6*** 13320-92-8 18249-01-9 24054-44-2 28279-27-8
 65159-60-6 65159-61-7 65159-62-8 65159-63-9 65159-64-0
 65159-65-1 65159-66-2 65159-67-3 65159-68-4 65159-69-5
 65159-70-8 65159-71-9 65159-72-0 65159-73-1 65159-74-2
 65159-75-3 65159-76-4 65159-77-5 65159-78-6 65159-79-7
 65159-80-0 65159-81-1 65159-82-2 ***65159-83-3*** 65159-84-4
 65159-85-5 65181-56-8 65181-57-9 65181-58-0 65206-45-3
 65206-46-4
 RL: USES (Uses)
 (in electrophotog. migration imaging process)

L10 ANSWER 16 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1973:36228 CAPLUS <<LOGINID::20061101>>
 DN 78:36228
 ED Entered STN: 12 May 1984
 TI Silver halide photographic emulsions supersensitized with an oxadiazole and a ***methine*** dye
 IN Brooks, Dugald A.
 PA Eastman Kodak Co.
 SO U.S., 7 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 IC G03C
 INCL 096123000
 CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic Processes)
 FAN.CNT 1
 PATENT NO. KIND DATE APPLICATION NO. DATE

 PI US 3615633 A 19711026 US 1969-851074 19690818
 PRAI US 1969-851074 A 19690818
 CLASS
 PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

 US 3615633 IC G03C
 INCL 096123000

IPCI G03C0001-28; G03C0001-08 [C*]
NCL 430/573.000; 430/576.000; 548/143.000; 548/156.000

GI For diagram(s), see printed CA Issue.

AB Supersensitizing dye mixts. for Ag halide emulsions, giving essentially clear layers with excellent keeping stability and causing relatively little or no fogging in both fresh and incubated conditions, are made up of a sensitizing ***methine*** dye and an oxazole, oxadiazole, thiazole, or thiadiazole (I; Y = O, S; Z = an unsubstituted or substituted ***methine*** group or N; R = C1-4 alkyl, aryl, amino, amido, Cl, Br; and R1 = R, H). Thus, a Ag(Br,I) gelatin emulsion contg., per mole Ag, 0.04 g of 3,3'-diethylselenadicarbocyanine iodide (II) and 0.66 g I (Y = O, Z = N, R = Ph, R1 = Me) (III) after processing photog., had a relative speed of 132, a .gamma. of 0.90, and a fog of 0.04 vs. the resp. values of 100, 0.92, and 0.04 for a III-free control emulsion contg. II alone.

ST supersensitizing dye photog mixt; ***methine*** dye supersensitizing photog; oxazole supersensitizer photog; oxadiazole supersensitizer photog; thiazole supersensitizer photog; thiadiazole supersensitizer photog

IT Photographic sensitizers

(super-, from ***methine*** -oxadiazole dye mixts.)

IT 92-71-7 852-38-0 905-62-4 1437-57-6 1679-98-7 1806-34-4
1843-16-9 2002-03-1 2425-95-8 3704-40-3 4046-03-1 16157-14-5
25877-46-7 31709-08-7 39719-78-3 39719-81-8 39719-82-9
39719-87-4 39719-88-5 39719-89-6 39719-90-9 39719-92-1

RL: USES (Uses)

(photog. supersensitizers from ***methine*** dyes and)

IT 977-96-8 1742-90-1 ***2256-48-6*** 2573-45-7 3071-69-0
18371-32-9 18371-33-0 18371-38-5 21414-07-3 28279-27-8
32151-93-2 32456-19-2 39719-96-5 39719-97-6 39719-98-7
39719-99-8 39720-00-8 39720-02-0 39720-03-1 39720-04-2
39839-00-4

RL: USES (Uses)

(photog. supersensitizers from oxadiazole dyes and)

L10 ANSWER 17 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1965:439594 CAPLUS <<LOGINID::20061101>>

DN 63:39594

OREF 63:7151c-h,7152a

ED Entered STN: 22 Apr 2001

TI Holopolar ***cyanine*** dyes

IN Brooker, Leslie G. S.; Webster, Frank G.

PA Eastman Kodak Co.

SO 27 pp.

DT Patent

LA Unavailable

IC C09B

CC 46 (Dyes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 988627		19650407	GB 1961-31756	19610904
	US 3194805		19650713	US 1960-53698	19600902
	US 3253925		19660531	US 1965-450598	19650423
PRAI	US		19600902		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
GB 988627	IC	C09B
	IPCI	C09B
	IPCR	C09B0023-00 [I,C*]; C09B0023-01 [I,A]; C09B0023-10 [I,A]; G03C0001-12 [I,A]; G03C0001-12 [I,C*]; G03C0001-22 [I,A]
US 3194805	IPCR	C09B0023-00 [I,C*]; C09B0023-01 [I,A]; C09B0023-10 [I,A]; G03C0001-12 [I,A]; G03C0001-12 [I,C*]; G03C0001-22 [I,A]
	NCL	544/300.000; 430/577.000; 544/304.000; 546/173.000; 548/120.000; 548/121.000; 548/150.000; 548/152.000; 548/156.000; 548/157.000; 548/159.000; 548/217.000; 548/219.000; 548/224.000; 548/305.100; 548/306.100; 548/312.100; 548/364.700; 548/455.000; 558/373.000; 558/374.000; 558/426.000
US 3253925	IPCR	C09B0023-00 [I,C*]; C09B0023-01 [I,A]; C09B0023-10 [I,A]; G03C0001-12 [I,A]; G03C0001-12 [I,C*];

GI For diagram(s), see printed CA Issue.

AB Merocyaninelike dyes of structure I and holopolar ***cyanine*** dyes (CA 55, 6220b) of structure of II are described. The dyes are useful photog. sensitizers. A mixt. of 19.8 g. 2-indanone, 11 g. CH₂(CN)₂, 2.5 g. NH₄OAc, 4 mL. HOAc, and 100 mL. CHCl₃ was refluxed 30 min., evapd. to dryness, and the residue washed with H₂O and MeOH to give 73% 2-(dicyanomethylene)indan (III), m. 190-3.degree.. Similarly prepd. were (compd., m.p., and % yield given): 1-(dicyanomethylene)indan, 147-8.degree., 65; 1,3diethyl-5-(2-indanylidene)barbituric acid, 165-7.degree., 47; 1-(dicyanomethylene)-1,2,3,4-tetrahydronaphthalene, 107-8.degree., 48; 2-(dicyanomethylene)-1,2,3,4-tetrahydronaphthalene, 102-3.degree., 22; 4-(2-indanylidene)-3-phenylisoxazolin-5-one, 144-5.degree., 17; 4-(2-indanylidene)-1-phenyl-5-pyrazolone, 273-4.degree., 71; 3-ethyl-5-(1-indanylidene)rhodanine, 164-6.degree., 22. A mixt. of III 5.4, 2-(acetanilidovinyl)-3-ethylbenzothiazolium iodide (IV) 13.5, Et₃N 3.3 g., and 50 mL. EtOH was refluxed 15 min. and cooled. The ppt. was extd. with hot MeOH and recrystd. from pyridine-MeOH to give 21% I [X = S, Y = C(CN)₂, R = Et, R' = H, n = 0, m = p = 1] (V), m. 246-50.degree. (decompn.). A mixt. of V 1.98, IV 2.25, Et₃N 0.6 g., and 15 mL. pyridine was refluxed 10 min. and cooled. The ppt. was extd. with two 350-mL. portions of hot pyridine to give 33% II [X = Z = S, Y = C(CN)₂, R = R' = Et, p = q = 1], m. 288-9.degree., sensitivity max. 690 m.mu., sensitivity limit 780 m.mu.. Similarly prepd. I and II are tabulated. Formula, X, Y, Z, R, R', Ar, Ar', n, m, p, q, %yield, m.p. (decompn.), sensitivity max. (m.mu.), sensitivity limit (m.mu.); I, S, C(CN)₂, Me, , , 1,0,0, 35, 245-6.degree., 545, 565; I, S, C(CN)₂, Et, H, , , 1,0,1, , 259-60.degree., 660, 680; I, S, C(CN)₂, Et, H, , , 1,0,2, 36, 240-1.degree., , I, O, C(CN)₂, Me, , , 1,0,0, 28, 230-1.degree., 490, 510; I, S, C(CN)₂, Me, benzo, 1,0,0, 55, 265-7.degree., 550, 575; I, CH:CH:, C(CN)₂, Et, , , 1,0,0, 19, 227-8.degree., , I, S, C(CN)₂, Et, Me, benzo, 1,0,1, 1, 191-3.degree., , I, S, C(CN)₂, Et, , , 0,1,0, 46, 256-8.degree., , I, S, C(CN)₂, Et, H, , , 0,1,2, 22, 228-30.degree., , I, O, C(CN)₂, Et, H, , , 0,1,1, 28, 214-15.degree., , I, S, A, Me, , , 0,1,0, 12, 272-3.degree., , I, S, C(CN)₂, Me, , , 2,0,0, 76, 232-3.degree., 555; I, S, C(CN)₂, Me, benzo, 2,0,0, 80, 289-90.degree., 555, 580; I, CH:CH:, C(CN)₂, Et, , , 2,0,0, 33, 285-6.degree., , I, O, C(CN)₂, Et, H, , , 2,0,1, 19, 213-14.degree., 600, 690; I, S, C(CN)₂, Me, H, , , 2,0,1, 5, 231-2.degree., 580, 690; I, O, B, Et, H, , , 1,0,1, 4, 192-7.degree., , I, S, B, Et, H, benzo, 1,0,1, 8, 169-70.degree., , I, S, C(CM)₂, Et, , , 1,1,0, 54, 254-6.degree., , I, S, C(CN)₂, Et, benzo, 1,1,0, 4, 222-5.degree., , I, S, C(CN)₂, Et, H, , , 1,1,1, 8, 218-25.degree., , II, S, C(CN)₂, S, Et, Et, , , 2,2,13, 237-8.degree., 630, 690; II, S, C(CN)₂, S, Et, Et, , , 1,2,35, 244-5.degree., 810, 840; II, O, C(CN)₂, S, Et, Et, , , 1,1,45, 255-6.degree., 685, 730; II, S, A, S, Me, Et, , , 0,2,27, 285-6.degree., 730, 810; II, S, A, S, Me, Me, , , 0,0,28, >310.degree., , II, S, A, S, Et, Et, , , 1,1,61, >310.degree., 750, 770; II, O, A, O, Et, Et, , , 1,1,41, 280-1.degree., 680, 720; II, S, A, S, Me, Me, benzo, benzo, , , 0,0,62, 241-3.degree., 590, 620; II, S, C(CN)₂, S, Me, Me, , , 0,0,32, >310, 565, 610; II, S, A, S, Me, Me, benzo, , , 0,0,54, 231-2.degree., 555, 575;

IT Photography

(sensitizers, holopolar ***cyanine*** dyes as)

IT Barbituric acid, 5-[1,3-bis(3-methyl-2-benzothiazolinyldene)-2-indanylidene]-1,3-diethyl-

IT 233-74-9, Naphtho[1,2-d]thiazole (derivs., dyes)

IT ***2256-48-6***, .DELTA.2, .alpha.-Indanmalononitrile, 1,3-bis[2-(3-ethyl-2-benzothiazolinyldene)ethylidene]- 2509-33-3, .DELTA.1, .alpha.-Indanmalononitrile, 2-(3-methyl-2-benzoxazolinyldene)- 2509-69-5, .DELTA.1, .alpha.-Indanmalononitrile, 2-(1-methylnaphtho[1,2-d]thiazolin-2-ylidene)- 2509-70-8, .DELTA.1, .alpha.-Indanmalononitrile, 2-(1-ethyl-2(1H)-quinolyldene)- 2509-71-9, .DELTA.2, .alpha.-Indanmalononitrile, 1-(3-ethyl-2-benzothiazolinyldene)- 2509-72-0, .DELTA.2, .alpha.-Indanmalononitrile, 1-[4-(3-ethyl-2-benzothiazolinyldene)-2-butenylidene]- 2509-73-1, .DELTA.2, .alpha.-Indanmalononitrile, 1-[2-(3-ethyl-2-benzoxazolinyldene)ethylidene]- 2509-74-2, Barbituric acid, 1,3-diethyl-5-[1-(3-methyl-2-benzothiazolinyldene)-2-indanylidene]- 2509-75-3, .DELTA.1(2H), .alpha.-Naphthalenemalononitrile, 3,4-dihydro-2-(3-methyl-2-benzothiazolinyldene)- 2509-76-4, .DELTA.1(2H), .alpha.-Naphthalenemalononitrile,

3,4-dihydro-2-(1-methylnaphtho[1,2-d]thiazolin-2-ylidene)- 2509-77-5,
 .DELTA.1(2H), .alpha.-Naphthalenemalononitrile, 2-(1-ethyl-2(1H)-
 quinolylydene)-3,4-dihydro- 2509-78-6, .DELTA.1(2H), .alpha.-
 Naphthalenemalononitrile, 2-[2-(3-ethyl-2-benzoxazolinylydene)ethylidene]-
 3,4-dihydro- 2509-79-7, .DELTA.1(2H), .alpha.-Naphthalenemalononitrile,
 3,4-dihydro-2-[2-(3-methyl-2-benzothiazolinylydene)ethylidene]-
 2509-80-0, Rhodanine, 3-ethyl-5-[2-[2-(3-ethyl-2-
 benzoxazolinylydene)ethylidene]-1-indanylydene]- 2509-81-1, Rhodanine,
 3-ethyl-5-[2-[2-(1-ethylnaphtho[1,2-d]thiazolin-2-ylidene)ethylidene]-1-
 indanylydene]- 2509-82-2, .DELTA.2(1H), .alpha.-Naphthalenemalononitrile,
 3-(3-ethyl-2-benzothiazolinylydene)-3,4-dihydro- 2509-83-3,
 .DELTA.2(1H), .alpha.-Naphthalenemalononitrile, 3-(1-ethylnaphtho[1,2-
 d]thiazolin-2-ylidene)-3,4-dihydro- 2509-84-4, .DELTA.2(1H), .alpha.-
 Naphthalenemalononitrile, 3-[2-(3-ethyl-2-benzothiazolinylydene)ethylidene
]-3,4-dihydro- ***2509-85-5*** , .DELTA.2, .alpha.-Indanmalononitrile,
 1,3-bis[4-(3-ethyl-2-benzothiazolinylydene)-2-butenylydene]-
 2509-86-6 , .DELTA.2, .alpha.-Indanmalononitrile,
 1-[4-(3-ethyl-2-benzothiazolinylydene)-2-butenylydene]-3-[2-(3-ethyl-2-
 benzothiazolinylydene)ethylidene]- 2509-87-7, Barbituric acid,
 1,3-diethyl-5-[1-[4-(3-ethyl-2-benzothiazolinylydene)-2-butenylydene]-3-(3-
 methyl-2-benzothiazolinylydene)-2-indanylydene]- 2509-88-8, Barbituric
 acid, 5-[1,3-bis[2-(3-ethyl-2-benzothiazolinylydene)ethylidene]-2-
 indanylydene]-1,3-diethyl- 2509-89-9, .DELTA.2, .alpha.-
 Indanmalononitrile, 1,3-bis(3-methyl-2-benzothiazolinylydene)-
 2509-90-2, Barbituric acid, 1,3-diethyl-5-[1-(3-methyl-2-
 benzothiazolinylydene)-3-(1-methylnaphtho[1,2-d]-thiazolin-2-ylidene)-2-
 indanylydene]- 2509-91-3, o-Anisanilide, 3'-(2-benzothiazolyl)-4'-
 hydroxy- 2510-00-1, .DELTA.2, .alpha.-Indanmalononitrile 2510-01-2,
 .DELTA.1, .alpha.-Indanmalononitrile 2510-02-3, Barbituric acid,
 1,3-diethyl-5-(2-indanylydene)- 2510-03-4, .DELTA.1(2H), .alpha.-
 Naphthalenemalononitrile, 3,4-dihydro- 2510-04-5, .DELTA.2(1H), .alpha.-
 Naphthalenemalononitrile, 3,4-dihydro- 2510-05-6, 2-Pyrazolin-5-one,
 4-(2-indanylydene)-1-phenyl- 2510-06-7, Rhodanine, 3-ethyl-5-(1-
 indanylydene)- 2510-07-8, .DELTA.2, .alpha.-Indanmalononitrile,
 1-[2-(3-ethyl-2-benzothiazolinylydene)ethylidene]- 2510-08-9,
 .DELTA.1, .alpha.-Indanmalononitrile, 2-(3-methyl-2-benzothiazolinylydene)-
 2510-09-0, .DELTA.1, .alpha.-Indanmalononitrile, 2-[2-(3-ethyl-2-
 benzothiazolinylydene)ethylidene]- 2533-12-2, Hexananilide,
 3'-(2-benzothiazolyl)-4'-hydroxy- 2533-13-3, Acetanilide,
 3'-(2-benzothiazolyl)-4'-hydroxy-2-phenyl- 2533-14-4, Benzanilide,
 3'-(2-benzothiazolyl)-4'-hydroxy 2573-26-4, p-Anisanilide,
 3'-(2-benzothiazolyl)-4'-hydroxy- 2573-42-4, .DELTA.1, .alpha.-
 Indanmalononitrile, 2-[4-(3-ethyl-2-benzothiazolinylydene)-2-butenylydene]-
 2573-43-5, .DELTA.1, .alpha.-Indanmalononitrile, 2-[2-(1-
 ethylnaphtho[1,2-d]thiazolin-2-ylidene)-1-methylethylidene]- 2573-45-7,
 Barbituric acid, 5-[1,3-bis[2-(3-ethyl-2-benzoxazolinylydene)ethylidene]-2-
 indanylydene]-1,3-diethyl- 2573-46-8, Barbituric acid,
 5-[1,3-bis(1-methylnaphtho[1,2-d]thiazolin-2-ylidene)-2-indanylydene]-1,3-
 diethyl- 2574-27-8, 2-Isloxazolin-5-one, 4-(2-indanylydene)-3-phenyl-
 2746-82-9 , .DELTA.2, .alpha.-Indanmalononitrile,
 1-[2-(3-ethyl-2-benzothiazolinylydene)ethylidene]-3-[2-(3-ethyl-2-
 benzoxazolinylydene)ethylidene]- 2842-13-9, Acetanilide,
 3'-(2-benzothiazolyl)-4'-hydroxy- 31093-80-8, Naphthanilide,
 3'-(2-benzothiazolyl)-4'-hydroxy-
 (prepn. of)

L10 ANSWER 18 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1962:401937 CAPLUS <<LOGINID::20061101>>

DN 57:1937

OREF 57:332i,333a-h

ED Entered STN: 22 Apr 2001

TI ***Cyanines*** for color photography

PA Kodak, Soc. Anon

DT Patent

LA Unavailable

CC 11 (Radiation Chemistry and Photochemistry)

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	BE 607696		19600902	BE	
	US 3128179		19640407	US 1960-53689	19600902

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

US 3128179 IPCR G03G0005-04 [I,C*]; G03G0005-06 [I,A]; G03G0005-06
[I,C*]; G03G0005-09 [I,A]
NCL 430/093.000; 252/501.100

AB 1-Dicyanomethyleneindan (I), m. 147-80 (MeOH), was prepd. in 65% yield as grayish white crystals by refluxing 39.6 g. 1-indanone, 19.8 g. malononitrile, 2.5 g. NH₄OAc, 4 cc. AcOH, 40 cc. CHCl₃, and simultaneous distn. of 5.4 cc. H₂O. 2-Dicyanomethyl-eneindan, m. 190-3, was prepd. in 73% yield (brownish), 1-dicyanomethylene-1,2,3,4-tetrahydronaphthalene (colorless), m. 107-8 (EtOH), in 48% yield from 1-tetralone, and 2-dicyanomethylene-1,2,3,4-tetrahydronaphthalene (colorless), m. 102-3 (MeOH), in 22% yield. 1,3-Diethyl-5-(2indanylidene)barbituric acid (colorless), m. 165-7 (EtOH) was prepd. in 47% yield by refluxing for 2 h. 19 g. 2-indanone, 26.5 g. 1,3-diethylbarbituric acid, and 2.5 cc. piperidine in 100 cc. EtOH. 1-Dicyanomethylene-2-(3methyl-2-benzothiazolinyldiene)indan (orange), m. 245-6 (decompn.) (pyridine/MeOH), was prepd. in 35% yield by refluxing for 15 min. 5.4 g. I, 7.4 g. 3-methyl-2-methylthiobenzothiazolium p-toluenesulfonate, 6.06 g. Et₃N, 50 cc. EtOH; it sensitized Ag(Br,I) emulsions to 565 m.mu., max. 545 m.mu.. Similarly were obtained (m.p., % yield, limit and absorption max. in m.mu. given): 1-dicyanomethylene-2-(3-ethyl-2-benzothiazolinyldiene)ethylidene)indan (green needles), 259-60 (decompn.), -, 680, 660; 1-dicyanomethylene-2-[(3 - Et - 2- benzothiazolinyldiene) - 2- butenylidene]indan (dark green), 240-1 (decompn.), 36, -, -; 1-dicyanomethylene-2- (3- methyl-2-benzoxazolinyldiene)indan (brownish red), 230-1 (decompn.), -, 510, 490; 1-dicyanomethylene-2- (1 - methyl-naphtho [1,2] thiazolin-2-ylidene)indan (red), 265-7 (decompn.), 55, 575, 550; 1-dicyanomethylene-2-(1ethyl-2(1H)-quinolylidene)indan, 227-8 (decompn.), 19, -, -; 1-dicyanomethylene-2-[(1-ethylnaphtho[1,2]thiazolin-2-ylidene)isopropylidene]indan (dark), 191-3 (decompn.), 1, -, -; 2-dicyanomethylene-1-[(3-ethyl-2benzothiazolinyldiene)ethylidene]indan (II) (green), 246-50 (decompn.), 21, -, -; 2-dicyanomethylene-1-[(3ethyl-2-benzothiazolinyldiene)-2-butenylidene]indan (dark green), 228-30, 22, -, -; 2-dicyanomethylene-1-[(3ethyl-2-benzoxazolinyldiene)ethylidene]indan (green), 2145 (decompn.), 28, -, -; 2-dicyanomethylene-1,3-bis(3methyl-2-benzothiazolinyldiene)indan (dark needles), <310, 32, 610, 565; 2-dicyanomethylene-1,3-bis[(3-ethyl-2-benzothiazolinyldiene)ethylidene]indan (dark green), 2889, 33, 780, 690; 2-dicyanomethylene-1,3-bis[(3-ethyl-2benzothiazolinyldiene)-2-butenylidene]indan (dark), 2378 (decompn.), 13, 690, 630; 2-dicyanomethylene-1-[(3ethyl-2-benzothiazolinyldiene)-2-butenylidene] - 3- [(3- ethy-2-benzothiazolinyldiene)ethylidene]indan (black), 244-5 (decompn.), 35, 840, 810; 2-dicyanomethylene-1-[(3-ethyl-2-benzothiazolinyldiene)ethylidene]-3- [(3-ethyl-2-benzoxazolinyldiene)ethylidene]indan (gray), 255-6.degree. (decompn.), 45, 730, 685; 1,3-diethyl-5-[1-(3-methyl-2-benzothiazolinyldiene)indan-2-ylidene] barbituric acid (brownish red), 272-3 (decompn.) (pyridine), 12, -, -; 1,3-diethyl-5-[1,3-bis(3-methyl-2- benzothiazolinyldiene)indan-2-ylidene] barbituric acid (red), <310, 28, -, -; 1,3-diethyl-5-[1,3-bis(3ethyl - 2 - benzothiazolinyldieneethylidene)indan - 2 - ylidene] barbituric acid (green), <310, 61, 770, 750; corresponding benzoxazolinyldiene deriv. (green), 280-1 (decompn.), 41, 720, 680; 1,3-diethyl-5-[1,3-bis(methylnaphtho [1,2] thiazolin-2-ylidene)indan-2-ylidene] barbituric acid (dark), 242-3, 62, 620, 590; 1,3-diethyl-5-[1-(3-ethyl-2benzothiazolinyldiene)-2-butadienylidene]-3-(3-methyl-2- benzothiazolinyldiene)indan-2-ylidene] barbituric acid (green), 285-43 (decompn.), 27, 810, 730; 1,3-diethyl-5-[1- (3 - methyl-2- benzothiazolinyldiene) - 3- (1 -methyl-naphtho-[1,2]thiazolinyldiene)indan-2-ylidene]barbituric acid (red), 231-2 (decompn.), 54, 575, 555; 1-dicyanomethylene- 1,2,3,4- tetrahydro- 2-(3-methyl- 2- benzothiazolinyldiene)- naphthalene (red), 232-3 (decompn.), 76, 555, -; 1-di- cyanomethylene- 1,2,3,4- tetrahydro-2- (1-methylnaphtho-[1,2]thiazolin-2-ylidene)naphthalene (brownish red), 289- 90 (decompn.), 80, 580, 555; 1-dicyanomethylene-2-(1- ethyl-2(1H)-quinolylidene)-1,2,3,4-tetrahydronaphthalene (red), 285-6 (decompn.), 33, -, -; 1-dicyanomethylene- 2-[(3-ethyl-2-benzoxazolinyldiene)ethylidene]-1,2,3,4-tetra- hydronaphthalene (green needles), 213-14 (decompn.), 19, 690, 600; and 1-dicyanomethylene-1,2,3,4-tetrahydro- 2 - [(3 - methyl- 2 - benzothiazolinyldiene)ethylidene] naphtha- lene (green needles), 231-2 (decompn.), 5, 690, 580.

IT Spectra, visible and ultraviolet

(of ***cyanine*** dyes, for photog. color sensitization)

IT Photography, color

(sensitizers, ***cyanine*** dyes as)

IT Barbituric acid, 5-[1,3-bis(3-methyl-2-benzothiazolinylidene)-2-indanylidene]-1,3-diethyl-

IT 4735-28-8, Naphtho[1,2-d]thiazoline (derivs.)

IT ***2256-48-6***, .DELTA.2,.alpha.-Indanmalononitrile, 1,3-bis[2-(3-ethyl-2-benzothiazolinylidene)ethylidene]- 2509-33-3, .DELTA.1,.alpha.-Indanmalononitrile, 2-(3-methyl-2-benzoxazolinylidene)-2509-69-5, .DELTA.1,.alpha.-Indanmalononitrile, 2-(1-methylnaphtho[1,2-d]thiazolin-2-ylidene)- 2509-70-8, .DELTA.1,.alpha.-Indanmalononitrile, 2-(1-ethyl-2(1H)-quinolylidene)- 2509-72-0, .DELTA.2,.alpha.-Indanmalononitrile, 1-[4-(3-ethyl-2-benzothiazolinylidene)-2-butenylidene]-2509-73-1, .DELTA.2,.alpha.-Indanmalononitrile, 1-[2-(3-ethyl-2-benzoxazolinylidene)ethylidene]- 2509-74-2, Barbituric acid, 1,3-diethyl-5-[1-(3-methyl-2-benzothiazolinylidene)-2-indanylidene]-2509-75-3, .DELTA.1(2H),.alpha.-Naphthalenemalononitrile, 3,4-dihydro-2-(3-methyl-2-benzothiazolinylidene)- 2509-76-4, .DELTA.1(2H),.alpha.-Naphthalenemalononitrile, 3,4-dihydro-2-(1-methylnaphtho[1,2-d]thiazolin-2-ylidene)- 2509-77-5, .DELTA.1(2H),.alpha.-Naphthalenemalononitrile, 2-(1-ethyl-2(1H)-quinolylidene)-3,4-dihydro- 2509-78-6, .DELTA.1(2H),.alpha.-Naphthalenemalononitrile, 2-[2-(3-ethyl-2-benzoxazolinylidene)ethylidene]-3,4-dihydro- 2509-79-7, .DELTA.1(2H),.alpha.-Naphthalenemalononitrile, 3,4-dihydro-2-[2-(3-methyl-2-benzothiazolinylidene)ethylidene]-***2509-85-5***, .DELTA.2,.alpha.-Indanmalononitrile, 1,3-bis[4-(3-ethyl-2-benzothiazolinylidene)-2-butenylidene]-***2509-86-6***, .DELTA.2,.alpha.-Indanmalononitrile, 1-[4-(3-ethyl-2-benzothiazolinylidene)-2-butenylidene]-3-[2-(3-ethyl-2-benzothiazolinylidene)ethylidene]- 2509-87-7, Barbituric acid, 1,3-diethyl-5-[1-[4-(3-ethyl-2-benzothiazolinylidene)-2-butenylidene]-3-(3-methyl-2-benzothiazolinylidene)-2-indanylidene]- 2509-88-8, Barbituric acid, 5-[1,3-bis[2-(3-ethyl-2-benzothiazolinylidene)ethylidene]-2-indanylidene]-1,3-diethyl- 2509-89-9, .DELTA.2,.alpha.-Indanmalononitrile, 1,3-bis(3-methyl-2-benzothiazolinylidene)-2509-90-2, Barbituric acid, 1,3-diethyl-5-[1-(3-methyl-2-benzothiazolinylidene)-3-(1-methylnaphtho[1,2-d]thiazolin-2-ylidene)-2-indanylidene]- 2510-02-3, Barbituric acid, 1,3-diethyl-5-(2-indanylidene)- 2510-03-4, .DELTA.1(2H),.alpha.-Naphthalenemalononitrile, 3,4-dihydro- 2510-04-5, .DELTA.2(1H),.alpha.-Naphthalenemalononitrile, 3,4-dihydro- 2510-07-8, .DELTA.2,.alpha.-Indanmalononitrile, 1-[2-(3-ethyl-2-benzothiazolinylidene)ethylidene]- 2510-08-9, .DELTA.1,.alpha.-Indanmalononitrile, 2-(3-methyl-2-benzothiazolinylidene)-2510-09-0, .DELTA.1,.alpha.-Indanmalononitrile, 2-[2-(3-ethyl-2-benzothiazolinylidene)ethylidene]- 2573-42-4, .DELTA.1,.alpha.-Indanmalononitrile, 2-[4-(3-ethyl-2-benzothiazolinylidene)-2-butenylidene]-2573-43-5, .DELTA.1,.alpha.-Indanmalononitrile, 2-[2-(1-methylnaphtho[1,2-d]thiazolin-2-ylidene)-1-methylethylidene]- 2573-45-7, Barbituric acid, 5-[1,3-bis[2-(3-ethyl-2-benzoxazolinylidene)ethylidene]-2-indanylidene]-1,3-diethyl- 2573-46-8, Barbituric acid, 5-[1,3-bis(1-methylnaphtho[1,2-d]thiazolin-2-ylidene)-2-indanylidene]-1,3-diethyl- ***2746-82-9***, .DELTA.2,.alpha.-Indanmalononitrile, 1-[2-(3-ethyl-2-benzothiazolinylidene)ethylidene]-3-[2-(3-ethyl-2-benzoxazolinylidene)ethylidene]- (prepn. of)

L10 ANSWER 19 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1960:21669 CAPLUS <<LOGINID::20061101>>

DN 54:21669

OREF 54:4217a-i,4218a-i,4219a

ED Entered STN: 22 Apr 2001

TI ***Cyanines***

IN Anon.

PA Kodak Soc.

DT Patent

LA Unavailable

CC 5 (Photography)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI BE 560805		19570930	BE	

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

AB 1,3-Diethyl-5-[2,5-bis(1-ethyl-2(1H)-naphtho[1,2]thiazolyli-
dene)cyclopentylidene]barbituric acid is prepd. by refluxing for 30 min. a mixt. of 4.61
g. 1,3-diethyl-5-[2-(1-ethyl-2(1H)-naphtho[1,2]thiazolyli-
dene)cyclopentylidene]barbituric acid (I), 7.98 g. 1-ethyl-2-ethylthionaphtho[1,2]thiazoliu-
m ethosulfate (II), 30 cc. anhyd. pyridine, and 2.02 g. Et3N. After
cooling, the reaction mixt. is stirred with cold H2O. The solid is
filtered and washed with H2O. The residue is stirred with hot MeOH and
cooled. The dye is filtered and washed with MeOH, then stirred with 185
cc. EtOH. The yield is 21% red needles, m. 242-3.degree. (decomp.)
(pyridine); it sensitizes AgBr emulsions from 530-740 m.mu. with max. at
700 m.mu.. 1,3-Diethyl-5-[2,5-bis(1-ethyl-2(1H)-
naphtho[1,2]thiazolyli-
dene)cyclopentylidene]thiobarbituric acid is prepd.
by heating at 130.degree. for 10 min. a mixt. of 2.36 g.
1,3-diethyl-5-[2-(1-ethyl-2(1H)-naphtho-[1,2]
thiazolyli-
dene)cyclopentylidene]thiobarbituric acid (III), 3.99 g. II, 10
cc. isoquinoline, and 1.01 g. Et3N. The reaction mixt. is stirred with
Et2O, then filtered and the residue treated by hot MeOH. The yield is 10%
red needles, m. 244-5.degree. (decomp.) (pyridine/EtOH mixt.); it
sensitizes emulsions with max. at 700 m.mu.. 3-Ethyl-5-[2,5-bis(3-methyl-
2(3H)-benzothiazolyli-
dene)cyclopentylidene]rhodanine is prepd. in 0.56 g.
yield from 3.74 g. 3-ethyl-5-[2-(3-methyl-2(3H)-
benzothiazolyli-
dene)cyclopentylidene]rhodanine (IV) and 7.34 g.
3-methyl-2-methylthiobenzothiazolium p-toluenesulfonate (V); the crude dye
is extd. with ligroine (100-110.degree.) then with hot C6H6, and the dark
green crystals, m. 286-7.degree. (decomp.). 1,3-Diethyl-5-[2,5-bis(3-
methyl-2(3H)-benzothiazolyli-
dene)cyclopentylidene]barbituric acid is
prepd. in 26% yield from 1,3-diethyl-5-[2(3-methyl-2(3H)-
benzothiazolyli-
dene)cyclopentylidene]barbituric acid (VI) and V; the dye,
m. 298-9.degree. (decomp.) (EtOH), sensitizes emulsions from 590 to 680
m.mu. with max. at 650 m.mu.. Similarly, 1,3-diethyl-5-[2,5-bis(3-ethyl-
2(3H)-benzothiazolyli-
dene)cyclopentylidene]barbituric acid, m.
296-8.degree. (decomp.) (EtOH), is obtained in 9% yield; it sensitizes
emulsions with max. at 650 m.mu.. 1,3-Diethyl-5-[2,5-bis(3-methyl-2(3H)-
benzoxazolyli-
dene)cyclopentylidene]barbituric acid is prepd. by heating,
until bubbles appear, a mixt. of 4.67 g. 2-methylthiobenzoxazole and 5.27
g. Me p-toluenesulfonate. The quaternary salt is refluxed for 7 min. with
2.70 g. 1,3-diethyl-5-[2-(3-methyl-2(3H)-benzoxazolyli-
dene)cyclopentyliden-
e]barbituric acid, 15 cc. anhyd. pyridine, and 2.86 g. Et3N. The yield is
0.05 g. dark green crystals, m. 236-7.degree. (decomp.) (C6H6).
1-Dicyanomethylene-2,5-bis(3-methyl-2(3H)-benzothiazolyli-
dene)cyclopentane
(VII), m. 309-11.degree. (decomp.), is obtained in 14% yield from
1-dicyanomethylene-2-(3-methyl-2(3H)-benzothiazolyli-
dene)cyclopentane and
V; it sensitizes emulsions from 590 to 680 m.mu. with max. at 665 m.mu..
The following compds. have similarly been prepd.: 1-dicyanomethylene-2-(3-
ethyl-2(3H)-benzothiazolyli-
dene)-5-(3-methyl-2(3H)-
benzothiazolyli-
dene)cyclopentane, m. 280-3.degree. (decomp.), in 7% yield,
max. sensitization at 600 m.mu.; 1-dicyanomethylene-2,5-bis(3-ethyl-2(3H)-
benzothiazolyli-
dene)cyclopentane, m. 282-4.degree. (decomp.), in 13%
yield, max. sensitization at 600 m.mu.; 1-(1-cyano-1-
ethoxycarbonylmethylene)-2,5-bis(3-methyl-2(3H)-
benzothiazolyli-
dene)cyclopentane (VIII), m. 301-2.degree. (decomp.), in
30% yield, max. sensitization at 640 m.mu.; 1-dicyanomethylene-2-(3-ethyl-
2(3H)-benzothiazolyli-
dene)-5-[(3-ethyl-2(3H)-benzothiazolyli-
dene)ethyliden-
e]cyclopentane, m. 278-9.degree. (decomp.), in 30% yield, max.
sensitization at 640 m.mu.. 1-Dicyanomethylene-2,5-bis[(3-ethyl-2(3H)-
benzothiazolyli-
dene)ethyliden-
e]cyclopentane is prepd. by refluxing for 15
min. 1.60 g. 1-dicyanomethylene-2-[(3-ethyl-2(3H)-
benzothiazolyli-
dene)ethyliden-
e]cyclopentane, 4.50 g. 2-(2-
acetylanilinovinyl)-3-ethylbenzothiazolium iodide (IX), 40 cc. pyridine,
1.01 g. Et3N, and 1.02 g. Ac2O; after hot filtration, the dye is washed
with pyridine, then with H2O, and dark blue needles, m. 295-6.degree.
(decomp.) (pyridine), are obtained in 66% yield, max. sensitization at 770
m.mu.. Similarly, 1-dicyanomethylene-2,6-bis(3-methyl-2(3H)-
benzothiazolyli-
dene)cyclohexane, m. >330.degree., is obtained in 8% yield,
max. sensitization at 510 m.mu., and 1-dicyanomethylene-2-(3-ethyl-2(3H)-
benzothiazolyli-
dene)-6-(3-methyl-2(3H)-benzothiazolyli-
dene)cyclohexane, m.
275-7.degree. (decomp.), max. sensitization at 520 m.mu..
1,3-Diethyl-5-[2,5-bis[(3-ethyl-2(3H)-benzothiazolyli-
dene)ethyliden-
e]cyclopentylidene]barbituric acid, m. 257-8.degree. (decomp.), is prepd. in
14% yield from 5-cyclopentylidene-1,3-diethylbarbituric acid (X), IX, and
Et3N in 50 cc. abs. EtOH. Similarly, 1,3-bis(2-methoxyethyl)-5-[2,5-bis(1-

methyl-2(1H)-naphtho[1,2]thiazolylidene)cyclopentylidene]barbituric acid, m. 268-9.degree. (decomp.), is obtained in 26% yield; it sensitizes emulsions to 760 m.mu. with max. at 730 m.mu.. 4-[2,5-Bis(1-methyl-2(1H)-naphtho[1,2]thiazolylidene)cyclopentylidene]-3-phenyl-5(4H)-isoxazolone is prepd. by heating at 140-50.degree., 2.12 g. 4-[2-(1-methyl-2(1H)-naphtho[1,2]thiazolylidene)cyclopentylidene]-3-phenyl-5(4H)-isoxazolone (XI), 4.17 g. 1-methyl-2-methylthionaphtho[1,2]thiazolium p-toluenesulfonate, 15 cc. isoquinoline, and 1.01 g. Et₃N; the yield is 20% greenish black crystals, m. 253-5.degree. (decomp.), sensitizing emulsions to 765 m.mu. with max. at 730 m.mu.. The following dyes have been similarly prepd.: 2-[2-(1-ethyl-2(1H)-naphtho[1,2]thiazolylidene)-5-(3-methyl-2(3H)-benzothiazolylidene)cyclopentylidene]-3(2H)-thianaphthenone 1,1-dioxide, m. 249-50.degree. (decomp.), in 17% yield; 1,3-diethyl-5-[2-(1-ethyl-2(1H)-naphtho[1,2]thiazolylidene)-5-(3-methyl-2(3H)-benzothiazolylidene)cyclopentylidene]barbituric acid, m. 245-7.degree. (decomp.), in 10% yield, sensitization from 600 to 700 m.mu. with max. at 680 m.mu.; 1,3-diethyl-5-[2-(1-ethyl-2(1H)-naphtho[1,2]thiazolylidene)-5-(3-ethyl-2(3H)-naphtho[2,1]thiazolylidene)cyclopentylidene]barbituric acid, m. 257-8.degree. (decomp.), in 3% yield, sensitization from 580 to 720 m.mu. with max. at 690 m.mu.; 1,3-diethyl-5-[2-(1-ethyl-2(1H)-naphtho[1,2]thiazolylidene)-5-(1-methyl-2(1H)-naphtho[1,2]selenazolylidene)cyclopentylidene]barbituric acid, m. 261-2.degree. (decomp.), in 17% yield, sensitization to 740 m.mu. with max. at 550 and 690 m.mu.; 4-[2,5-bis(3-ethyl-2(3H)-benzothiazolylidene)cyclopentylidene]-3-methyl-1-phenyl-5-pyrazolone, the crude dye being washed successively with Et₂O, H₂O, EtOAc, and C₆H₆ before crystn. from hot EtOAc, m.p. 275-6.degree. (decomp.). 8,10-Ethylene-3,3',9-trimethylthiacarbocyanine bromide is prepd. by heating on a steam-bath for 30 min. a soln. of 0.65 g. VIII in a mixt. of 7.0 g. concd. H₂SO₄ and 3.0 g. H₂O; after ice and excess NH₄OH addn., the solid is filtered and washed with H₂O. The residue is washed with MeOH and the filtrate is treated with excess aq. KBr soln. After cooling, filtering, and washing with H₂O, then with Et₂O, and 2 recrystns. from EtOH, the yield is 17% in dark green dye, m. 225-6.degree. (decomp.). The same product is similarly obtained from VII. Intermediary 5-cyclopentylidene-3-ethylrhodanine, m. 100.5-1.5.degree. (MeOH), is prepd. by refluxing for 75 min. 32.2 g. 3-ethylrhodanine, 33.6 g. cyclopentanone, 30 cc. EtOH, and 2 cc. pyridine, yield 89%. 5-Cyclopentylidene-1,3-diethylbarbituric acid, m. 74-5.degree., 5-cyclopentylidene-1,3-diethyl-2-thiobarbituric acid, m. 88.5-90.degree., 5-cyclopentylidene-1,3-bis(2-methoxyethyl)barbituric acid, m. 60-2.degree., and 5-cyclopentylidene-3-ethyl-1-phenyl-2-thiohydantoin, m. 126-7.degree., have similarly been prepd. 4-Cyclopentylidene-3-phenyl-5(4H)-isoxazolone, m. 158-9.degree. (MeOH), is prepd. by refluxing for 4 hrs. 16.1 g. 3-phenyl-5(4H)-isoxazolone, 8.4 g. cyclopentanone, 2.5 g. NH₄OAc, 4.0 cc. AcOH, and 150 cc. CHCl₃, H₂O being continuously removed. 4-Cyclopentylidene-3-methyl-1-phenyl-5-pyrazolone, m. 124-5.degree., 2-cyclopentylidene-3(2H)-thianaphthenone 1,1-dioxide, m. 192-3.degree., 5-cyclohexylidene-3-ethylrhodanine, m. 93-4.degree., and 5-cyclohexylidene-1,3-diethylbarbituric acid, m. 230-2.degree., have similarly been prepd. Other intermediates are: 4-[2-(3-ethyl-2(3H)-benzothiazolylidene)cyclopentylidene]-3-methyl-1-phenyl-5-pyrazolone, m. 212-13.degree. (decomp.); 3-ethyl-5-[2-(3-methyl-2(3H)-benzothiazolylidene)cyclopentylidene]-1-phenyl-2-thiohydantoin, m. 256-7.degree. (decomp.), sensitizing emulsions until 610 m.mu. with max. at 560 m.mu.; 3-ethyl-5-[2-(3-methyl-2(3H)-benzothiazolylidene)cyclopentylidene]-2-thio-2,4-oxazolidinedione, m. 182-3.degree. (decomp.); 1,3-diethyl-5-[2-(3-methyl-2(3H)-benzoxazolylidene)cyclopentylidene]-2-thiobarbituric acid, m. 230-2.degree.; 1,3-diethyl-5-[2-(3-methyl-2(3H)-benzothiazolylidene)cyclopentylidene]barbituric acid, m. 260-1.degree. (decomp.); 1,3-bis(2-methoxyethyl)-5-[2-(1-methyl-2(1H)-naphtho[1,2]thiazolylidene)cyclopentylidene]barbituric acid, m. 243-5.degree. (decomp.); 2-[2-(1-ethyl-2(1H)-naphtho[1,2]thiazolylidene)cyclopentylidene]-3(2H)-thianaphthenone 1,1-dioxide, m. 274-5.degree. (decomp.), sensitizing emulsions to 530 m.mu.; 3-ethyl-5-[2-(1-ethyl-2(1H)-naphtho[1,2]thiazolylidene)cyclohexylidene]rhodanine, m. 189-91.degree. (decomp.), sensitizing emulsions to 610 m.mu.; I, m. 250-1.degree. (decomp.); III, m. 234-5.degree. (decomp.); IV, m. 220-1.degree. (decomp.), sensitizing emulsions to 630 m.mu.; VI, m. 274-5.degree. (decomp.), and XI, m. 260-1.degree. (decomp.), sensitizing emulsions until 540 m.mu. with max. at 520 m.mu..

(sensitizers, ***cyanine*** dyes as)

IT 36771-30-9, 2-Isoxazolin-5-one, 4-cyclopentylidene-3-phenyl- 65156-02-7,
2-Isoxazolin-5-one, 4-[2-(1-methylnaphtho[1,2-d]thiazolin-2-ylidene)cyclopentylidene]-3-phenyl- 65181-57-9, .DELTA.1,.alpha.-Cyclopentanemalononitrile, 2,5-bis(3-ethyl-2-benzothiazolinylidene)-70516-87-9, Barbituric acid, 5-[2,5-bis(1-methylnaphtho[1,2-d]thiazolin-2-ylidene)cyclopentylidene]-1,3-bis(2-methoxyethyl)- 70516-89-1, Barbituric acid, 5-[2,5-bis(1-ethylnaphtho[1,2-d]thiazolin-2-ylidene)cyclopentylidene]-1,3-diethyl- 70516-90-4, Barbituric acid, 1,3-diethyl-5-[2-(1-ethylnaphtho[1,2-d]thiazolin-2-ylidene)-5-(3-methyl-2-benzothiazolinylidene)cyclopentylidene]- 70545-32-3, .DELTA.1,.alpha.-Cyclopentanemalononitrile, 2-(3-ethyl-2-benzothiazolinylidene)-5-[2-(3-ethyl-2-benzothiazolinylidene)ethylidene]-***70545-33-4***, .DELTA.1,.alpha.-Cyclopentanemalononitrile, 2,5-bis[2-(3-ethyl-2-benzothiazolinylidene)ethylidene]- 99075-21-5, Rhodanine, 5-cyclopentylidene-3-ethyl- 99859-08-2, Rhodanine, 5-cyclohexylidene-3-ethyl- 100876-18-4, Barbituric acid, 5-cyclohexylidene-1,3-diethyl- 101265-17-2, Barbituric acid, 5-cyclopentylidene-1,3-diethyl-2-thio- 101265-34-3, Barbituric acid, 5-cyclopentylidene-1,3-diethyl- 101288-67-9, Hydantoin, 5-cyclopentylidene-3-ethyl-1-phenyl-2-thio- 101354-84-1, Barbituric acid, 5-cyclopentylidene-1,3-bis(2-methoxyethyl)- 101792-85-2, Rhodanine, 3-ethyl-5-[2-(3-methyl-2-benzothiazolinylidene)cyclopentylidene]- 101793-37-7, 2,4-Oxazolidinedione, 3-ethyl-5-[2-(3-methyl-2-benzothiazolinylidene)cyclopentylidene]-2-thio- 102373-83-1, Barbituric acid, 1,3-diethyl-5-[2-(3-methyl-2-benzothiazolinylidene)cyclopentylidene]- 102373-84-2, Barbituric acid, 1,3-diethyl-5-[2-(3-methyl-2-benzoxazolinylidene)cyclopentylidene]-2-thio- 102947-52-4, Rhodanine, 5-[2,5-bis(3-methyl-2-benzothiazolinylidene)cyclopentylidene]-3-ethyl-102951-29-1, 2-Pyrazolin-5-one, 4-[2-(3-ethyl-2-benzothiazolinylidene)cyclopentylidene]-3-methyl-1-phenyl- 103166-70-7, Barbituric acid, 5-[2,5-bis(3-methyl-2-benzothiazolinylidene)cyclopentylidene]-1,3-diethyl- 103166-71-8, Barbituric acid, 5-[2,5-bis(3-methyl-2-benzoxazolinylidene)cyclopentylidene]-1,3-diethyl- 103278-81-5, Barbituric acid, 5-[2,5-bis(3-ethyl-2-benzothiazolinylidene)cyclopentylidene]-1,3-diethyl- 103328-46-7, 2-Pyrazolin-5-one, 4-[2,5-bis(3-ethyl-2-benzothiazolinylidene)cyclopentylidene]-3-methyl-1-phenyl- 105474-97-3, Benzo[b]thiophen-3(2H)-one, 2-cyclopentylidene-, 1,1-dioxide 106596-98-9, Barbituric acid, 5-[2,5-bis[2-(3-ethyl-2-benzothiazolidene)ethylidene]cyclopentylidene]-1,3-diethyl- 109650-98-8, 2-Pyrazolin-5-one, 4-cyclopentylidene-3-methyl-1-phenyl- 113182-69-7, .DELTA.1,.alpha.-Cyclopentanemalononitrile, 2,5-bis(3-methyl-2-benzothiazolinylidene)- 114202-31-2, .DELTA.1,.alpha.-Cyclopentaneacetic acid, .alpha.-cyano-2,5-bis(3-methyl-2-benzothiazolinylidene)-, ethyl ester 114279-52-6, .DELTA.1,.alpha.-Cyclohexanemalononitrile, 2,5-bis(3-methyl-2-benzothiazolinylidene)- 114279-53-7, .DELTA.1,.alpha.-Cyclopentanemalononitrile, 2-(3-ethyl-2-benzothiazolinylidene)-5-(3-methyl-2-benzothiazolinylidene)- 114280-13-6, Hydantoin, 3-ethyl-5-[2-(3-methyl-2-benzothiazolinylidene)cyclopentylidene]-1-phenyl-2-thio- 114398-32-2, .DELTA.1,.alpha.-Cyclohexanemalononitrile, 2-(3-ethyl-2-benzothiazolinylidene)-5-(3-methyl-2-benzothiazolinylidene)- 114617-85-5, Thiocarbocyanine bromide, 8,10-ethylene-3,3',9-trimethyl-114617-85-5, 3-Methyl-2-[2-methyl-3-(3-methyl-2-benzothiazolinylidene)-1-cyclopenten-1-yl]benzothiazolium bromide 118766-46-4, Barbituric acid, 1,3-diethyl-5-[2-(1-ethylnaphtho[1,2-d]thiazolin-2-ylidene)cyclopentylidene]-2-thio- 119570-33-1, Barbituric acid, 1,3-bis(2-methoxyethyl)-5-[2-(1-methylnaphtho[1,2-d]thiazolin-2-ylidene)cyclopentylidene]- 120297-57-6, Barbituric acid, 5-[2,5-bis(1-ethylnaphtho[1,2-d]thiazolin-2-ylidene)cyclopentylidene]-1,3-diethyl-2-thio- 121526-54-3, Barbituric acid, 1,3-diethyl-5-[2-(1-ethylnaphtho[1,2-d]thiazolin-2-ylidene)-5-(1-methylnaphtho[1,2-d]selenazolin-2-ylidene)cyclopentylidene]- 121526-55-4, 2-Isoxazolin-5-one, 4-[2,5-bis(1-methylnaphtho[1,2-d]thiazolin-2-ylidene)cyclopentylidene]-3-phenyl- 122541-81-5, Barbituric acid, 1,3-diethyl-5-[2-(1-ethylnaphtho[1,2-d]thiazolin-2-ylidene)-5-(3-ethylnaphtho[2,1-d]thiazolin-2-ylidene)cyclopentylidene]- 123935-03-5, Rhodanine, 3-ethyl-5-[2-(1-ethylnaphtho[1,2-d]thiazolin-2-ylidene)cyclohexylidene]- 124100-30-7, Benzo[b]thiophen-3(2H)-one, 2-[2-(1-ethylnaphtho[1,2-d]thiazolin-2-ylidene)-5-(3-methyl-2-benzothiazolinylidene)cyclopentylidene]-, 1,1-dioxide 124103-52-2, Barbituric acid, 1,3-diethyl-5-[2-(1-ethylnaphtho[1,2-d]thiazolin-2-

ylidene)cyclopentylidene]- 124105-69-7, Benzo[b]thiophen-3(2H)-one,
2-[2; (1-ethylnaphtho[1,2-d]thiazolin-2-ylidene)cyclopentylidene]-,
*1,1-dioxide
(prepn. of)

=> d his

(FILE 'HOME' ENTERED AT 09:18:04 ON 01 NOV 2006)

FILE 'CAPLUS' ENTERED AT 09:18:17 ON 01 NOV 2006

FILE 'REGISTRY' ENTERED AT 09:18:23 ON 01 NOV 2006

L1 STRUCTURE UPLOADED
L2 STRUCTURE UPLOADED
L3 STRUCTURE UPLOADED
L4 2 S L1 FULL SSS
L5 103 S L2 FULL SSS
L6 0 S L3 FULL SSS
L7 0 S (L4 OR L5 OR L6) AND CYANINE
L8 0 S (L4 OR L5 OR L6) AND CARBOCYANINE

FILE 'CAPLUS' ENTERED AT 09:19:56 ON 01 NOV 2006

L9 47 S (L4 OR L5 OR L6)
L10 19 S L9 AND (CYANINE OR CARBOCYANINE OR METHINE OR POLYMETHINE)

=> s 19 and (photopolymer? or polymer? or photocur? or photohard? or photoresist)

16305 PHOTOPOLYMER?
21150 PHOTOPOLYMN
316 PHOTOPOLYMNS
21235 PHOTOPOLYMN
(PHOTOPOLYMN OR PHOTOPOLYMNS)
1422 PHOTOPOLYMD
1122 PHOTOPOLYMG
30644 PHOTOPOLYMER?
(PHOTOPOLYMER? OR PHOTOPOLYMN OR PHOTOPOLYMD OR PHOTOPOLYMG)
1915776 POLYMER?
87234 POLYMD
87234 POLYMD
(POLYMD)
33002 POLYMG
341161 POLYMN
8958 POLYMNS
342335 POLYMN
(POLYMN OR POLYMNS)
1984661 POLYMER?
(POLYMER? OR POLYMD OR POLYMG OR POLYMN)
35547 PHOTOCUR?
1369 PHOTOHARD?
46173 PHOTORESIST
33082 PHOTORESISTS
54115 PHOTORESIST
(PHOTORESIST OR PHOTORESISTS)
L11 4 L9 AND (PHOTOPOLYMER? OR POLYMER? OR PHOTOCUR? OR PHOTOHARD? OR
PHOTORESIST)

=> d all 1-4

L11 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:96112 CAPLUS <<LOGINID::20061101>>
DN 142:186505
ED Entered STN: 03 Feb 2005
TI Two-photon absorbing ***polymerizable*** compositions, their
photopolymerization and applications for stereophotolithography
and color filters
IN Akiba, Masaharu; Takizawa, Hiroo
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 66 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C08F002-44

ICS C08F002-46; G02B005-22; G03F007-004; G03F007-029
 CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 27, 28, 35, 38, 73

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005029725	A2	20050203	JP 2003-272369	20030709
PRAI	JP 2003-272369		20030709		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2005029725	ICM	C08F002-44
	ICS	C08F002-46; G02B005-22; G03F007-004; G03F007-029
	IPCI	C08F0002-44 [ICM,7]; C08F0002-46 [ICS,7]; G02B0005-22 [ICS,7]; G03F0007-004 [ICS,7]; G03F0007-029 [ICS,7]
	IPCR	C08F0002-44 [I,A]; C08F0002-44 [I,C*]; C08F0002-46 [I,A]; C08F0002-46 [I,C*]; G02B0005-22 [I,A]; G02B0005-22 [I,C*]; G03F0007-004 [I,A]; G03F0007-004 [I,C*]; G03F0007-029 [I,A]; G03F0007-029 [I,C*]
	FTERM	2H025/AA01; 2H025/AB13; 2H025/AB14; 2H025/AC01; 2H025/AD01; 2H025/BC13; 2H025/BC42; 2H025/BD02; 2H025/BE00; 2H025/CA00; 2H025/CC11; 2H025/CC20; 2H048/CA04; 2H048/CA14; 4J011/AA05; 4J011/AC04; 4J011/BB01; 4J011/BB02; 4J011/PA22; 4J011/PB25; 4J011/QA00; 4J011/QA03; 4J011/QA04; 4J011/QA06; 4J011/QA07; 4J011/QA09; 4J011/TA03; 4J011/UA02; 4J011/WA01; 4J011/WA07
AB	The compns. contain ***polymerizable*** compds., two-photon absorbing compds., ***polymn*** initiators, and coloring agents. The compns. are ***polymd*** by irradiation with light of wavelength longer than absorption regions of the compns. from UV to visible ray and other than absorption peaks to give colored products. The compns. are effectively ***photopolymd*** and colored independently of concn. of the coloring agents.	
ST	***photopolymerizable*** compn two photon absorption; stereophotolithog two photon absorption; color filter two photon absorption ***photopolymn***	
IT	Photoinaging materials (***photopolymerizable*** ; ***photopolymn*** . of two-photon absorbing ***polymerizable*** compns. for manuf. of stereophotolithog. and color filters)	
IT	Optical filters Two-photon absorption (***photopolymn*** . of two-photon absorbing ***polymerizable*** compns. for manuf. of stereophotolithog. and color filters)	
IT	Photolithography Stereolithography (stereophotolithog.; ***photopolymn*** . of two-photon absorbing ***polymerizable*** compns. for manuf. of stereophotolithog. and color filters)	
IT	66142-15-2P 88253-66-1P 88340-89-0P 681836-46-4P RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent) (manuf. of two-photon absorbing compd. from; ***photopolymn*** . of two-photon absorbing ***polymerizable*** compns. for manuf. of stereophotolithog. and color filters)	
IT	115-80-0 120-92-3, Cyclopentanone 769-42-6 927-63-9 1497-49-0 4485-89-6 4637-24-5 5217-47-0 29636-96-2 61931-68-8 134957-47-4 165547-54-6 398522-14-0 RL: RCT (Reactant); RACT (Reactant or reagent) (manuf. of two-photon absorbing compd. from; ***photopolymn*** . of two-photon absorbing ***polymerizable*** compns. for manuf. of stereophotolithog. and color filters)	
IT	500908-05-4P RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (***photopolymn*** . of two-photon absorbing ***polymerizable*** compns. for manuf. of stereophotolithog. and color filters)	
IT	33628-03-4P 78902-42-8P 500905-67-9P 681836-47-5P 718636-60-3P 774216-84-1P RL: CAT (Catalyst use); IMF (Industrial manufacture); TEM (Technical or	

engineered material use); PREP (Preparation); USES (Uses)
(two-photon absorbing compd.; ***photopolymerizable*** of two-photon
absorbing ***polymerizable*** compns. for manuf. of
stereophotolithog. and color filters)

IT 52560-25-5 111545-69-8 183272-14-2 289892-10-0 308116-42-9
553654-84-5 680232-65-9 680232-71-7 680232-73-9 680232-75-1
680232-77-3 680232-79-5 680232-87-5 718636-58-9 718636-62-5
718636-63-6 752253-83-1 809233-25-8 816453-43-7 831218-03-2
831218-04-3 ***831218-05-4*** ***831218-06-5*** 835594-48-4
835621-22-2

RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES
(Uses)

(two-photon absorbing compd.; ***photopolymerizable*** of two-photon
absorbing ***polymerizable*** compns. for manuf. of
stereophotolithog. and color filters)

L11 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1997:480651 CAPLUS <<LOGINID::20061101>>

DN 127:101775

ED Entered STN: 02 Aug 1997

TI Photoradical generating agent, ***photopolymerizable*** composition,
and process of presensitized lithographic printing plate

IN Nakayama, Noritaka

PA Konica Co., Japan

SO Jpn. Kokai Tokkyo Koho, 24 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03F007-029

ICS C07F009-54; C08F002-50; G03F007-031; C07C381-12

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

Section cross-reference(s): 35, 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09134009	A2	19970520	JP 1995-291286	19951109
PRAI	JP 1995-291286		19951109		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 09134009	ICM	G03F007-029
	ICS	C07F009-54; C08F002-50; G03F007-031; C07C381-12
	IPCI	G03F0007-029 [ICM,6]; C07F0009-54 [ICS,6]; C08F0002-50 [ICS,6]; G03F0007-031 [ICS,6]; C07C0381-12 [ICS,6]

GI

/ Structure 9 in file .gra /

AB In the photoradical generating agent contg. an onium salt represented by
I, II, III, and IV (R1-4, R10-12 = alkyl, aryl, aralkyl; R5-7 = alkyl,
aryl; R8,9 = aryl; X- = counter ion), a radical generating agent, and
carbon black, the onium salt and/or the radical generating agent is
adsorbed on carbon black. The counter ion may be a halogen ion. The
radical generating agent may be a bisimidazole deriv. The compn. is used
for a photosensitive layer of a presensitized lithog. printing plate, in
which the photosensitive layer contains a compd. having .gtoreq.1
ethylenic unsatd. bond, a binder, and the photoradical generating agent.
The presensitized lithog. printing plate is exposed by a laser beam, and
then unexposed areas of the protective layer and the photosensitive layer
are eluted. A high concn. of the photoradical was generated by
irradiating IR light.

ST photoradical generator presensitized lithog printing plate

IT Lithographic plates

(***photopolymerizable*** compn. in presensitized lithog. printing
plate)

IT Carbon black, uses

RL: NUU (Other use, unclassified); USES (Uses)

(***photopolymerizable*** compn. in presensitized lithog. printing
plate)

IT 869-51-2, Tris(2-hydroxyethyl)sulfonium chloride 1643-19-2,
Tetrabutylammonium bromide 3115-68-2, Tetrabutylphosphonium bromide
3462-97-3, 4-Methoxybenzyltriphenylphosphonium chloride 4189-82-6
5197-95-5, Benzyltriethylammonium bromide 5667-47-0 14937-42-9,
Tetra(decyl)ammonium bromide 25316-59-0, Benzyltributylammonium bromide
58377-39-2
RL: MOA (Modifier or additive use); USES (Uses)
(***photopolymerizable*** compn. in presensitized lithog. printing
plate)
IT ***2256-48-6*** 12157-31-2 108961-97-3 109347-70-8 110930-60-4
173474-43-6
RL: PEP (Physical, engineering or chemical process); TEM (Technical or
engineered material use); PROC (Process); USES (Uses)
(***photopolymerizable*** compn. in presensitized lithog. printing
plate)
IT 90-94-8 1707-68-2 82799-44-8 189515-41-1
RL: MOA (Modifier or additive use); USES (Uses)
(photoradical generating agent in compn. in presensitized lithog.
printing plate)

L11 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1992:117174 CAPLUS <<LOGINID::20061101>>
DN 116:117174
ED Entered STN: 20 Mar 1992
TI Electrophotographic photosensitive member
IN Miyazaki, Hajime; Takai, Hideyuki; Go, Shintetsu; Iuchi, Kazushi
PA Canon K. K., Japan
SO U.S., 14 pp.
CODEN: USXXAM
DT Patent
LA English
IC ICM G03G005-06
INCL 430073000
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)
Section cross-reference(s): 41

FAN.CNT 1
PATENT NO. KIND DATE APPLICATION NO. DATE

PI US 5047304 A 19910910 US 1989-423230 19891018
PRAI US 1989-423230 19891018

CLASS
PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

US 5047304 ICM G03G005-06
INCL 430073000
IPCI G03G0005-06 [ICM,5]
IPCR G03G0005-06 [I,C*]; G03G0005-06 [I,A]
NCL 430/073.000; 430/059.200; 430/076.000

OS MARPAT 116:117174
GI

/ Structure 10 in file .gra /

AB The member has a photosensitive layer contg. a charge-generating substance
from an azo pigment I [A1,A2 = arom. or heterocyclic radical linked
through a linking radical; B = atoms necessary to form 5-7-membered arom.
ring; X = atoms necessary to form arom. or heterocyclic ring; Y = O, S,
C(CN)2, CHCN]. The photosensitive member has high sensitivity and
stability.
ST electrophotog photoconductor charge generator; azo dye charge generator
IT Diazonium compounds
RL: USES (Uses)
(***polymers*** , for presensitized plates)
IT Lithographic plates
(presensitized, diazo compd. ***polymer*** for)
IT 139323-69-6 139323-70-9 ***139323-71-0*** 139323-72-1
139323-73-2 ***139323-74-3*** 139323-75-4 139323-76-5
139323-77-6 139323-78-7 ***139323-79-8*** 139358-99-9
139359-00-5

RL: USES (Uses)
 (charge-generating agent, in electrophotog. member)
 IT 369-57-3P 139323-67-4P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (prepn. and reaction of, azo dye from)
 IT 139323-68-5P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and use of, as charge-generating agent in electrophotog.
 member)

L11 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1979:430533 CAPLUS <<LOGINID::20061101>>
 DN 91:30533
 ED Entered STN: 12 May 1984
 TI Electrically photosensitive particles for electrophoretic imaging methods
 IN Webster, Frank Glenn; Regan, Michael Thomas
 PA Eastman Kodak Co., USA
 SO Ger. Offen., 50 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 IC G03G005-024
 CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic Processes)
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2832461	A1	19790208	DE 1978-2832461	19780724
	FR 2399052	A1	19790223	FR 1978-21823	19780724
	FR 2399052	B1	19800404		
	JP 54024025	A2	19790223	JP 1978-90075	19780725
	GB 2002914	A	19790228	GB 1978-31058	19780725
	GB 2002914	B2	19820217		
PRAI	US 1977-818695	A	19770725		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 2832461	IC	G03G005-024
	IPCI	G03G0005-024; G03G0005-02 [C*]
	IPCR	G03G0017-00 [I,C*]; G03G0017-04 [I,A]
FR 2399052	IPCI	G03G0017-04; G03G0017-00 [C*]
	IPCR	G03G0017-00 [I,C*]; G03G0017-04 [I,A]
JP 54024025	IPCI	G03G0017-04; G03G0017-00 [C*]
	IPCR	G03G0017-00 [I,C*]; G03G0017-04 [I,A]
GB 2002914	IPCI	G03G0017-04; G03G0017-00 [C*]; C09B0021-00
	IPCR	G03G0017-00 [I,C*]; G03G0017-04 [I,A]

GI

/ Structure 11 in file .gra /

AB Elec. photosensitive compds. (63) of formula I (R1 and R2 = H, alkyl, or aryl; Z1 and Z2 are nonmetal bivalent groups; Y = N or CR5 where R5 = alkyl or aryl; R3 and R4 = H, alkyl, aryl, or CN, or together complete a 5-6 membered ring; m and n = 0 or 1; p, q, and r = 0, 1, or 2) are suggested for use in electrophoretic-imaging processes. Thus, a dispersion of II was prep'd. by mixing Isopar G 2.2, Solvesso 100 1.3, Piccotex 100 1.4, and a ***polymd*** mixt. of vinyltoluene, lauryl methacrylate, Li methacrylate, and methacrylic acid (56:40:3.6:0.4) 0.1 g, adding II 0.045 g and stainless steel spheres, and mixing 3 h in an agitator. Use of the dispersion in a std. electrophoretic-imaging app. gave high-quality deep-orange images.

ST electrophoretic imaging elec photosensitive material; cyanomethylene thiabenzocarbocyanine electrophoretic imaging

IT Photography, electro-, color
 (electrophoretic, elec. photosensitive compds. for)

IT Alkanes, uses and miscellaneous
 RL: PREP (Preparation)
 (iso-, in elec. photosensitive particle dispersion prep'n. for electrophoretic imaging process)

IT ***2256-48-6*** 2509-88-8 2573-44-6 2573-45-7 2573-46-8

13320-92-8	18249-01-9	24054-44-2	28279-27-8	54849-72-8
56387-34-9	65159-60-6	65159-61-7	65159-65-1	65159-66-2
65159-68-4	65159-69-5	65159-71-9	65159-72-0	65159-73-1
65159-74-2	65159-75-3	65159-77-5	65159-78-6	65159-79-7
65159-80-0	65159-81-1	***65159-83-3***	65159-84-4	65159-85-5
65181-56-8	65181-57-9	65181-58-0	65206-45-3	65206-46-4
70516-33-5	70516-34-6	70516-71-1	70516-72-2	70516-73-3
70516-74-4	70516-75-5	70516-76-6	70516-77-7	70516-78-8
70516-79-9	70516-80-2	70516-81-3	70516-82-4	70516-83-5
70516-84-6	70516-85-7	70516-86-8	70516-87-9	70516-88-0
70516-89-1	70516-90-4	70516-91-5	70516-92-6	70516-93-7
70545-32-3	***70545-33-4***			

RL: USES (Uses)

(elec. photosensitive particles of, for electrophoretic color imaging process)

IT 9017-27-0 62576-76-5

RL: USES (Uses)

(in elec. photosensitive particle dispersion prepn. for electrophoretic imaging process)

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(FILE 'HOME' ENTERED AT 09:18:04 ON 01 NOV 2006)

FILE 'CAPLUS' ENTERED AT 09:18:17 ON 01 NOV 2006

FILE 'REGISTRY' ENTERED AT 09:18:23 ON 01 NOV 2006

L1	STRUCTURE UPLOADED
L2	STRUCTURE UPLOADED
L3	STRUCTURE UPLOADED
L4	2 S L1 FULL SSS
L5	103 S L2 FULL SSS
L6	0 S L3 FULL SSS
L7	0 S (L4 OR L5 OR L6) AND CYANINE
L8	0 S (L4 OR L5 OR L6) AND CARBOCYANINE

FILE 'CAPLUS' ENTERED AT 09:19:56 ON 01 NOV 2006

L9	47 S (L4 OR L5 OR L6)
L10	19 S L9 AND (CYANINE OR CARBOCYANINE OR METHINE OR POLYMETHINE)
L11	4 S L9 AND (PHOTOPOLYMER? OR POLYMER? OR PHOTOCUR? OR PHOTOHARD?)

=> log y

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
91.38	602.39

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-17.25	-17.25

CA SUBSCRIBER PRICE

STN INTERNATIONAL LOGOFF AT 09:23:54 ON 01 NOV 2006